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THE COMPUTER COMMUNICATIONS MAGAZINE

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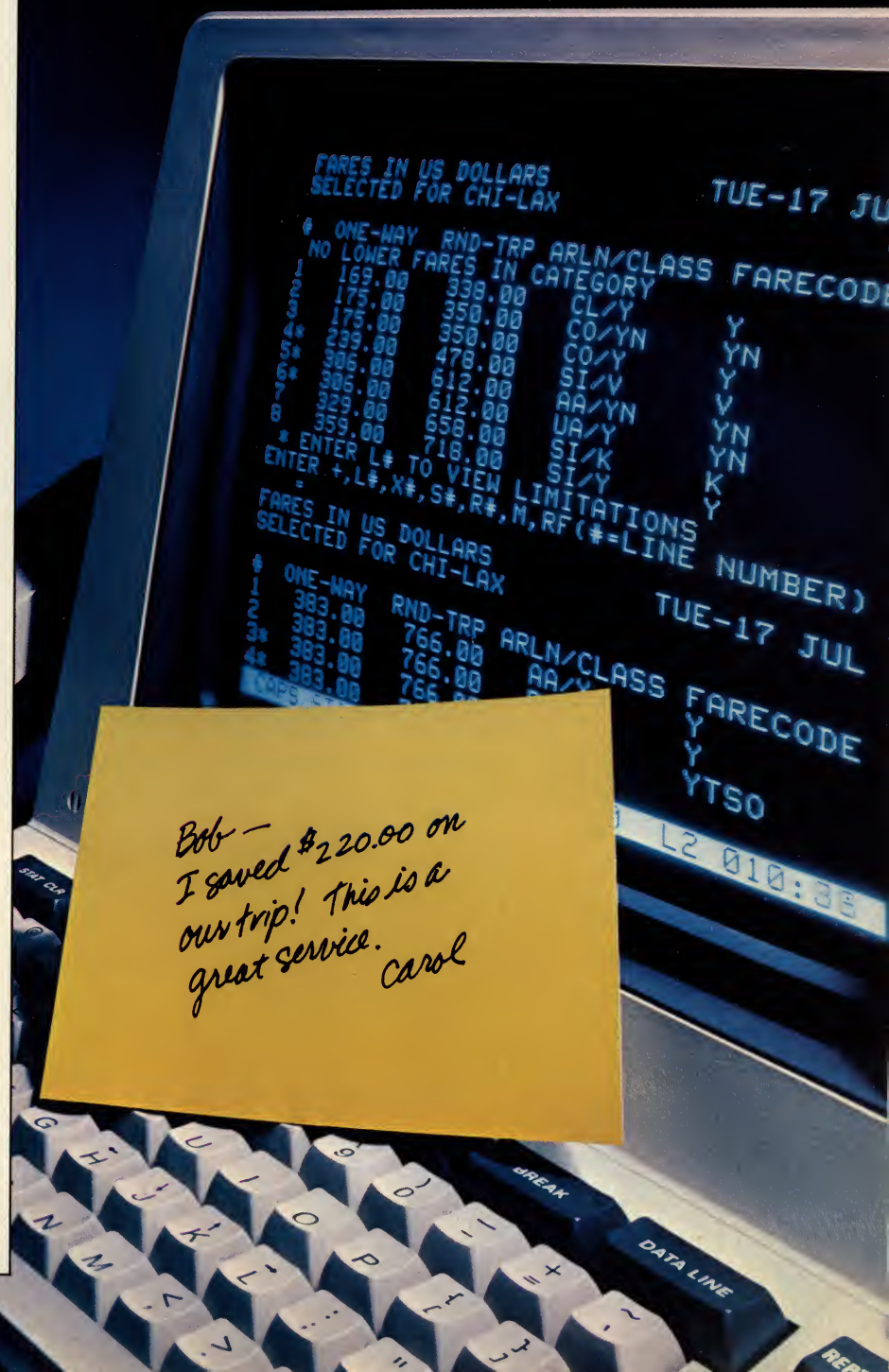

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CompuServe Page EBB-1
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To request information about products and services in Online Today simply follow prompts on the following pages.
Your requests will be electronically forwarded; responses may come either

Guidelines to Requesting Ad Information With the NEW EBB

Electronic Bounce Back Electronic Bounce Back (EBB) is *Online Today*'s electronic version of the traditional reader inquiry card. To request additional information about products or services described in *Online Today*, simply access CompuServe and Go EBB.

After a few pages of instructional information the following menu will appear:

A selection of either 1 or 2 will be followed by a menu listing of participants and the *Online Today* (printed) page on which each is located.

CompuServe Page EBB-9
Select the area of Online Today from which you would like additional information:
1. Display Ads
2. Editorial Articles/Reviews
3. Shopper's Guide

Enter your selection number, or H for more information.

Display Ads, Go EBB-20. Inquiries to this section will be followed by a brief description of the *Online Today* ad. To request additional printed information, simply enter your name and address at prompts.* EBB will add your User ID and electronically forward your request to the appropriate advertiser(s). Inquirer names, addresses and ID numbers will also be forwarded via U.S. mail at the end of each month.

Editorial Articles/Reviews, Go EBB-400. Requests* to this section will be stored and forwarded by traditional mail once each month.

CompuServe Page EBB-400
Online Today Articles/Review, Nov. 1983
p.xx = Online Today page reference
1. Engineering Specialist,p.36
2. Hayes Microcomputer,p.37
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5. The Incredible Jack,p.39
6. Omnifile,p.44

Shopper's Guide, Go EBB-37. This is *Online Today*'s classified section and is designed to enable readers to easily scan areas of interest.

To request information from Shopper's Guide advertisers send CompuServe EMAIL or use traditional methods of communication.

CompuServe Page EBB-37
SHOPPER'S GUIDE
1 - Rates & Information
2 - Software
3 - Services
4 - Consultants
5 - Retailers
Last menu page. Key digit or M for previous menu.

*Note: *Additional requests during the same session will not require you to re-enter your name and address.*

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About the Book

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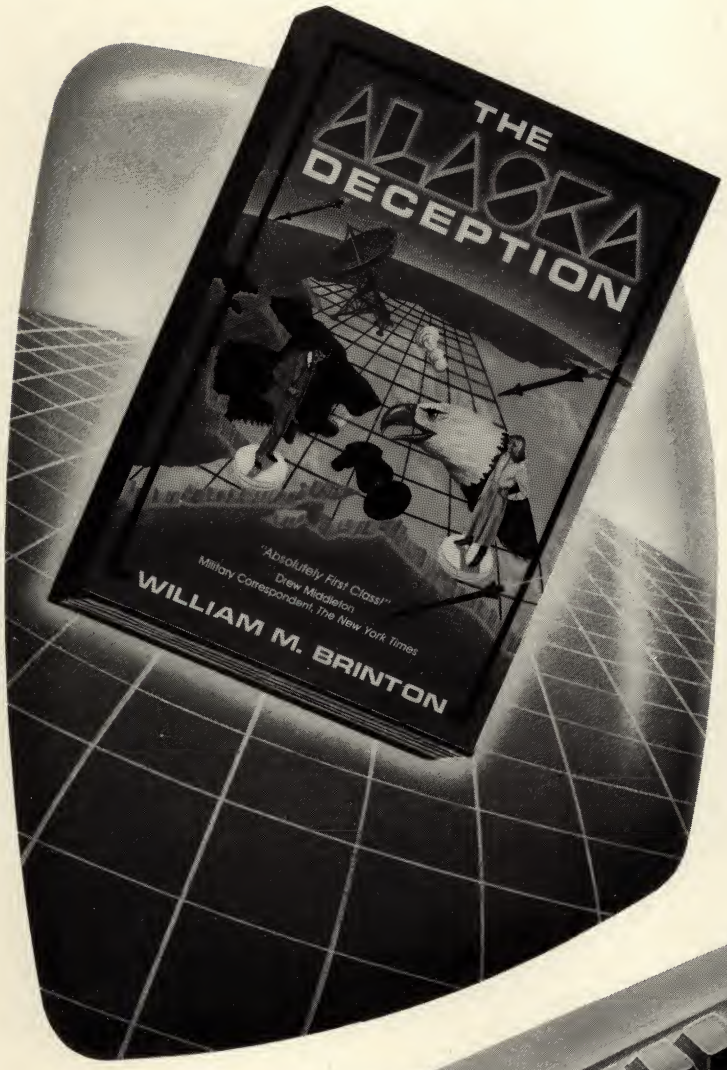

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THE COMPUTER COMMUNICATIONS MAGAZINE

FEATURE

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School children involved with computer networking projects do online research and communicate with other youngsters. Yet, relatively few school districts have the funds to link up their students.

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For those planning to attend college, CompuServe's College Board and College Press Service provide tips on everything from taking entrance exams to applying for financial aid.

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Comprehensive, worldwide airline information with a reservation option will soon be available to CompuServe subscribers. Sign up now for clearance to use the reservation system.

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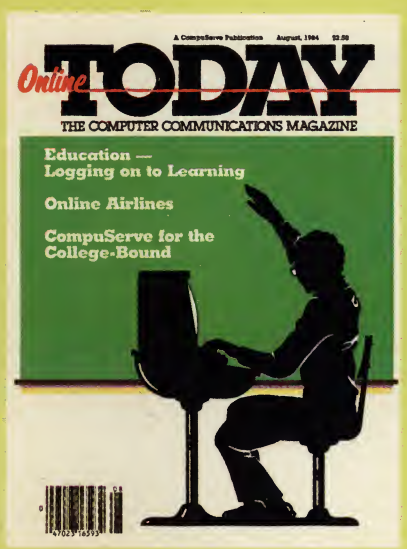
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Online Today **August, 1984**
Volume 3 Number 8

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Richard A. Baker
Editor
Douglas G. Branstetter
Art Director
Thom Misiak
Associate Editor
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Assistant Editor
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Ninety percent of the nation's schools own or plan to buy computers, according to a recent survey by McGraw-Hill Research. A few school districts, choosing to go beyond the basic hardware and software, purchase modems so students can access computer networks.

For those schools with networking capabilities, the possibilities are endless. Eighth-graders in Bloomington, Ind., have used the CompuServe Information Service to do a library research project on the online Grolier's Academic American Encyclopedia. In Upper Arlington, Ohio, students will be using computers to improve communication skills in a program that will include online interviewing, writing and participating in children's forums. In New Haven, Conn., computers at area elementary schools will be linked together in a network.

Educational networking by children occurs in relatively few school districts because of the lack of funding. While children tend to be fascinated with retrieving information online, it is an expensive educational experience. A typical online search costs between $10 and $15, depending on the cost of access and connect time. Online communication tends to be more cost-effective, because it can be done in less time and the information is not available in books.

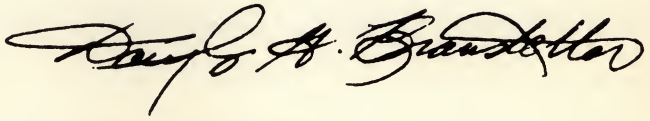
Students in areas without local educational networking programs may want to access one of the free national children's networks. In addition, parents and teachers who communicate through the educational forums on CompuServe's Consumer Information Service can exchange viewpoints on computers and education.

Contributing Editor Carole Houze Gerber describes the varied applications of networking in education ("Educational Networks: Logging on to Learning," page 13). With the article is a listing of current and upcoming education-related services available to CompuServe subscribers.

* * *

In the CompuServe Update section this month, you'll find advance notice of an online airline reservation system. Called The Travel Shopper, the system will be provided by TWA and CompuServe. By signing up for a Frequent Flyer Bonus number now, you'll save time this fall if you decide to make actual seat bookings on a flight.

We'll continue to include features on the consumer-related services and forums and the Executive Information Service. Look to this section for the latest information on the Electronic Mall and new CompuServe products. The CompuServe customer service department will continue to answer your frequently asked questions about using the information service. We welcome your contributions through the Update-d Gift of Time column, letters to the editor and Email.



Douglas G. Branstetter
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The Tandy 2000 Computer

A problem does indeed exist. I'm referring to the letter from Jim Davis, Salem, Ore., and the article in Monitor reviewing the Tandy 2000 computer.

It appears that *Online Today* has joined with other magazines to discredit a very fine line of computers from Radio Shack. These computers have a service support network that works, and the other two computer manufacturers would do well to clone it.

I also felt that your Monitor section made a very deliberate attempt to show how Tandy failed to make an IBM compatible product. The facts are:

- The Tandy 2000 is a next generation MS DOS computer that IBM failed to produce.
- The computer industry "rolled over and played dead" when IBM released its machines, which later proved to be lagging behind in advanced design.
- Computer designers bought into this IBM charade and came out with IBM clones, thus halting further computer development until Tandy took a bold step by releasing the 2000.
- If it wasn't for Microsoft Inc., the IBM PC would long ago have been relegated to the status of bookends.
- The Tandy 2000 runs MS DOS software 200 percent faster than any IBM PC and is a true 16 by 16 bit machine as compared to IBM's archaic 16 by 8 bit architecture.

Tandy does, as it has in the past, market a very competent line of serious computers with excellent support. Your biases are not appreciated if they're not supported with facts.

Ross F. Du Clair
Sacramento, Calif.

Adult message boards

I couldn't help but comment on the article on Public Message Systems written by John Edwards in your June 1984 issue.

In his article, he states, "The 'adult' systems typically feature an array of blue jokes and off-color message exchanges . . . There's an unmistakable aura of adolescence around these PMSs."

As the creator of the world's largest group of "adult-oriented" bulletin board systems (Dial-Your-Match, of which I have sold 120 copies now in operation all over the United States), I feel Mr. Edwards has missed the point of these type of systems.

Dial-Your-Match allows the caller to fill out a questionnaire about him/herself and will match the caller to other callers. They can communicate by private mail, or leave public messages.

I have found this type of system tends to promote "sexual" types of messages that are not at all adolescent. I have received amazingly few complaints which leads me to believe the people enjoy the freedom given to them by this type of system. For the first time in history, people are free to state what is on their minds, and are free from the censorship that has been made quite apparent on the larger pay networks wishing to protect their mass-appeal.

Gregg Collins
Dial-Your-Match
Burbank, Calif.

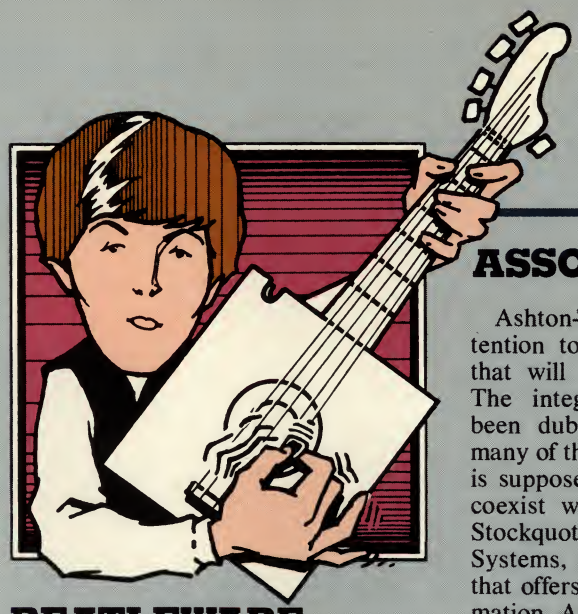
Please address your letters to CompuServe Consumer Information Service User ID number 70003,1372; CompuServe Executive Information Service 76003,104, or to: Editor, Online Today, *5000 Arlington Centre Blvd., PO Box 20212, Columbus, OH 43220.* Online Today *reserves the right to edit letters for length, content and clarity.*

LET YOUR MODEM DO THE DIALING

Having trouble keeping up with the unrelenting avalanche of new bulletin board and information services? Then you'll probably want to check out *The Computer Phone Book,* a comprehensive guide to telecomputing that lists the numbers of more than 400 private and corporate online databases in the United States, Canada and abroad.

Written by Mike Cane, the book lists systems by state, and includes the appropriate city and area code. Unlike similar compilations, according to Cane, 99.9 percent of the systems detailed have been called and verified. The book also contains a listing of BBSs with downloadable software, a discussion of various system formats, and background information on telecomputing in general.

The Computer Phone Book is published by NAL Books (P.O. Box 999, Bergenfield, NJ 07261) and retails for $9.95 ($12.50 in Canada). Monthly updates are available at a rate of $20 per year. Further details are available from Mike Cane. His CompuServe User ID is 70736,1500, or you can write to him at The Computer Phone Book, 175 Fifth Ave., Suite 3371, New York, NY 10010.



BEATLEWARE

Paul McCartney is a man of many talents. To date, he has made his mark in music, videos and movies. Now, McCartney is branching out into yet another field. Yep, you guessed it — computer software.

The ex-Beatle is currently working with Human Engineered Software (HES) on a game. The product, which will be based on his Twentieth Century Fox mystery-musical *Give My Regards to Broad Street,* is due to be released later this year.

And where did McCartney pick up his programming talent? Executives at HES won't comment on McCartney's exact role in the project, but say he has an "ongoing involvement" with the company.

ASSORTED BITS

Ashton-Tate has announced its intention to introduce a $695 program that will compete with Lotus 1-2-3. The integrated system, which has been dubbed Framework, will offer many of the same features as 1-2-3, but is supposed to be different enough to coexist with the Lotus product . . . Stockquote Hotline, from Brite Digital Systems, is a voice response system that offers 24-hour stock market information. Aimed at newspapers, the unit lets local readers receive verbal stock price, net-change, volume, and high and low price reports on all NYSE, AMEX and NASDAQ OTC stocks. The system receives its data from UPI's Stoxquote service. Callers select reports by entering an appropriate code on their Touch-Tone telephone . . . So what's new at computer whiz Nolan Bushnell's Pizza Time Theatre? How about bankruptcy? The once high-flying company has filed for protection from creditors under Chapter 11 of the U.S. Bankruptcy Act. The company has also sold its Sente Technologies subsidiary to BMDC Inc., a unit of the Bally Manufacturing Corp. of Chicago.

— John Edwards

BUYING TRENDS

"While both business organizations and consumers are dazzled by high-tech, a fear of obsolescence is causing buyer paralysis," says Judith Langer, president of Judith Langer Associates Inc., a consumer research firm specializing in qualitative techniques.

"The rate of innovation is so fast today, its very speed inhibits prospects from purchasing. If consumers buy a product that becomes outdated, they are, quite simply, stuck," she explains. Prospective buyers, then, often question whether waiting a while longer to buy that computer system won't in fact mean that the equipment they eventually purchase will be better and cheaper.

Langer advises marketing executives to encourage innovative programs that will put the consumer's fear to rest, including leasing agreements and trade-ins.

However, while consumers may be afraid to buy because of the changing technology, Langer notes that for the most part those same consumers are not afraid of the machines. She says that public attitudes toward high-tech equipment have largely shifted from fear and wariness to enthusiasm. Technology is seen as helping people to save time and effort and have fun. Shoppers are just highly selective about what and when they decide to buy.

"Manufacturers who blithely assume that high-tech mania is sufficient in itself to sell business people and consumers are often surprised to find resistance," she observes. That resistance results not from computerphobia, but rather from doubts about the product's usefulness. "Consumers want to know 'What will it do for me?' or negatively put, 'What will it do *to* me?' "

"While consumers and business customers find the world of high-tech equipment exciting, they often feel they can master and make use of only a small number of available features," Langer reports.

The New York-based market researcher encourages marketing executives to be aware of lifestyle changes that can affect consumer buying patterns. "For the high-tech buff, it may be enough to know that the machine is the latest model available. However, for the average consumer, it is necessary to demonstrate that technology — especially when it is high priced — will enrich the user's life, providing enjoyment as well as time-saving efficiency."

— Cathryn Conroy

WHOLE LOTTA SHAKIN' GOIN' ON?

Does the crystal ball of the computer industry show the makings of a major shakeout lurking in its hazy shadows? This is an interesting question, and one that a number of industry executives are beginning to seriously ponder.

The New York-based information and research firm FIND/SVP recently released a study stating that the U.S. microcomputer software market is expected to grow from $1.85 billion in 1983 to a staggering $12 billion in 1990. The keys to this explosive growth are evolving distribution strategies in business, education and home markets.

The report, titled *Microcomputer Software Distribution,* forecasts a shakeout in the general application business and home markets, while software publishers and distributors who do not gain a share in these markets will compete for the smaller, special applications market.

Says Peter Allen, FIND/SVP manager of market reports, "The next two years will see a continuation of the rapid evolution of the microcomputer industry. The manner in which microcomputer software is distributed will be one area in which the changes will be most conspicuous."

The report explains that the two predominant channels of distribution for software are retail outlets and direct response. "Between them, they account for some 78 percent of all microcomputer software distributed in 1983. However, we project a decline in the importance of these two channels due to changing user sophistication and numbers, enhanced technology, a shakeout in the personal computer hardware industry and advanced marketing programs," adds Allen.

According to FIND/SVP, the years 1982 and 1983 saw a critical change in the microcomputer industry. During that period, the installed base of personal computers rose dramatically as thousands of new users emerged. "This surge in use generated two distinct users' groups: those users who used computers before the surge and are now the leading edge buyers and those users who are new to computers and require foolproof or user-friendly programs."

The study predicts that IBM will be at the forefront of the personal computer hardware shakeout. "It is rapidly gaining market share, and many industry analysts expect it to reach 50 percent by 1985. The IBM compatibles would hold another 25 percent market shares by then. And Apple, Tandy, Commodore and others would compete for the rest.

"Software companies have flourished in the environment created by IBM's opening up of the PC's internal structure, as have the IBM compatible hardware manufacturers," continues Allen. "The danger for both is that IBM may switch to a proprietary operating system. If this happens, it would effectively deprive most software publishers of the bulk of the high-end corporate market. However, AT&T's entry into the PC market, expected later this year, may help these publishers continue accessing the high-end business market."

However, Dr. Rodnay Zaks, president of Sybex Computer Books, believes there is no shakeout occurring in the personal computer market, rather "it's merely the teething pains of an industry that is still in its infancy."

Says Zaks, "The rapid proliferation of products, with little or no industry standardization, is a historical pattern of dynamic new industries. The personal computer industry is no exception. Although a few companies have failed, we will still be seeing many more products — most software-related — before we begin to see less. Software is the new driving force of the industry, and it will affect both the design and use of all new computer hardware."

— Cathryn Conroy

COMPUTERCISE

Computers are hot, right? And fitness is hot, too, right? Then combining these two dynamite fields must surely be the road to riches.

That's what Lucille Roberts, founder and director of the Fitness Place health spa chain, fervently hopes. Roberts says that a computer can help flabbies get into shape, and she details how in her new book, *Computercise: Your 21-Day Personalized Body Shaping Program*, (Simon & Schuster, $16.95).

Roberts isn't a computer person, but after watching her teen-age sons use an Apple, she quickly realized the personal computer's value to the fitness field. "When I realized how a computer could retrieve any information that has been fed into it and could remember an endless stream of multiplication tables," she says, "my first thought was, 'How can I adapt this machine to my business?' "

In short order, Roberts placed "Daisy" computers (actually a Radio Shack TRS-80 Model III with custom-designed software) in each of her spas. The machines provided Roberts' customers with exercises geared to their specific body type, based on such information as age, weight and activity level. According to Roberts, people fall into various definable body classifications and the computer helps to peg

those different physiques and to propose an appropriate fitness plan.

Now, thanks to the book, those craving a slimmer, firmer body don't have to join one of Roberts' spas to receive Daisy's sage advice. By studying Roberts' text and answering several questionnaires, readers can determine their own body type and get to work on the appropriate exercises. Incidentally, in spite of the word "program" in its title, the book contains no actual program listings. Readers must apply the results of their questionnaires to the book's printed charts to come up with a personalized exercise regimen.

So much for progress.

A BREED ONLINE

The Public Broadcasting Service and Merrill Lynch and Co. are planning to introduce a cooperative teletext service sometime during 1985.

The two parties have been testing a service that will transmit financial information and other data to Merrill Lynch clients and branch offices since late last year. The system will use the transmitting facilities of PBS' 300 member stations. The data, which will be encoded into a broadcast signal's vertical blanking interval, will not affect a station's picture quality or schedule.

If successful, the data delivery system could be a boon to PBS' member stations. "We feel this system has the potential to bring at least several million dollars a year to public television," says Michael Soper, PBS Enterprises' director of development and marketing.

So far, PBS and Merrill Lynch have conducted tests with New York's WNET, Chicago's WTTW and Miami's WPBT. Later this year, the test lineup will be expanded to include in WGBH Boston, WETA Washington, KERA Dallas, and KCET Los Angeles.

LIFE IN THE ELECTRONIC COTTAGE

As we all know, the personal computer has helped thousands of people to launch their own home-based businesses. Now these small-scale entrepreneurs have their own organization — the National Association for the Cottage Industry.

According to NACI Executive Director Coralee Smith Kern, the association was founded to help cottage workers — both electronic and non-electronic — retain their right to pursue a home-based career. Says Smith, "NACI helps keep cottage folks aware of legislation that may affect management/employee rights, zoning problems and their right to choose their own workplace." She points out that the AFL-CIO has as one of its goals the elimination and prohibition of electronic cottages. Smith says that one way big labor is attempting to stifle home-based industries is to limit the amount of time workers can spend at a VDT.

In its effort to promote home workers' rights, NACI is sponsoring a series of regional conferences. The first such event was held in Chicago last May. A central topic at that conference was a Chicago city ordinance that prohibits the establishment of computer-based businesses in homes. The conference also included seminars on such subjects as direct marketing strategies, tax reporting and insurance requirements, as well as visits to area cottage businesses and meetings with local politicians. Future conferences are planned for later this year in Atlanta, Boston and Los Angeles.

Further details on NACI and its conferences are available by writing to the National Association for the Cottage Industry, P.O. Box 14460, Chicago, IL 60614. 312/472-8116.

— John Edwards

RADIO SHACK DATABASE

Radio Shack is planning to introduce a software database service to selected stores and computer centers.

The service will provide participating stores with terminals that are linked via telephone line to a mainframe database. The central database will contain information on thousands of TRS-80-based software products, allowing users to view product information and place orders. The program packages will not be delivered online but immediately shipped to the store by conventional means.

PORTABLE KEYBOARD

Here's an addition to your back-to-school shopping list: The Portable Keyboard, a lightweight, transportable unit that requires no extension cord or power supply. And it's made out of that new, revolutionary, ultra-thin computer medium — laminated cardboard.

If you haven't guessed by now, the Portable Keyboard isn't a real keyboard at all, but a practice keyboard for new and potential computer owners. The unit is a product of the Computer Practice Keyboard Co. of Union City, N.J.

CPKC President John Slawenski states in the product's press release: "Let's face it, it takes lots of finger practice to be able to locate and use the special function keys on computer keyboards, and a 'portable keyboard' makes practicing much easier when not at the actual computer. It's amazing how fast you can familiarize yourself with a particular computer by using the Portable Keyboard while traveling, during lunch, while waiting for an appointment, etc."

CPKC offers practice keyboards for "all popular computers, including the Apple, Atari, TRS-80, TI 99/4, IBM, Wang, Xerox, Osborne and Timex, to name just a few." The units are priced at $4.95 each ($8.50 for a pair).

So what's next, cardboard practice joysticks?

EDUCATIONAL NETWORKS

Logging on to Learning

by Carole Houze Gerber

Next fall in Upper Arlington, Ohio, gifted and learning disabled students from kindergarten through the twelfth grade will link up online to polish their writing skills.

In rural Appalachia, gifted high school science students will soon tap into a 14-school computer network to share and build a database of research information.

In New Haven, Connecticut, a networking program called "Learning Link" is being launched that will connect computers in area elementary schools with each other and with educational databases.

What all these ventures have in common is the big "F" behind most school online computer projects — funding. The first two projects are funded by grants from the Apple Education Foundation, and the latter by Southern New England Telephone. CompuServe is providing free connect time for the Upper Arlington project. For these students and those in a few other lucky districts with funded online learning projects, modems are standard equipment. Most school children, however, are not likely to link up anytime soon. Many universities have moved quickly to provide online services, but the majority of the nation's 15,275 school districts — still scrimping to buy the hardware basics — are light years behind.

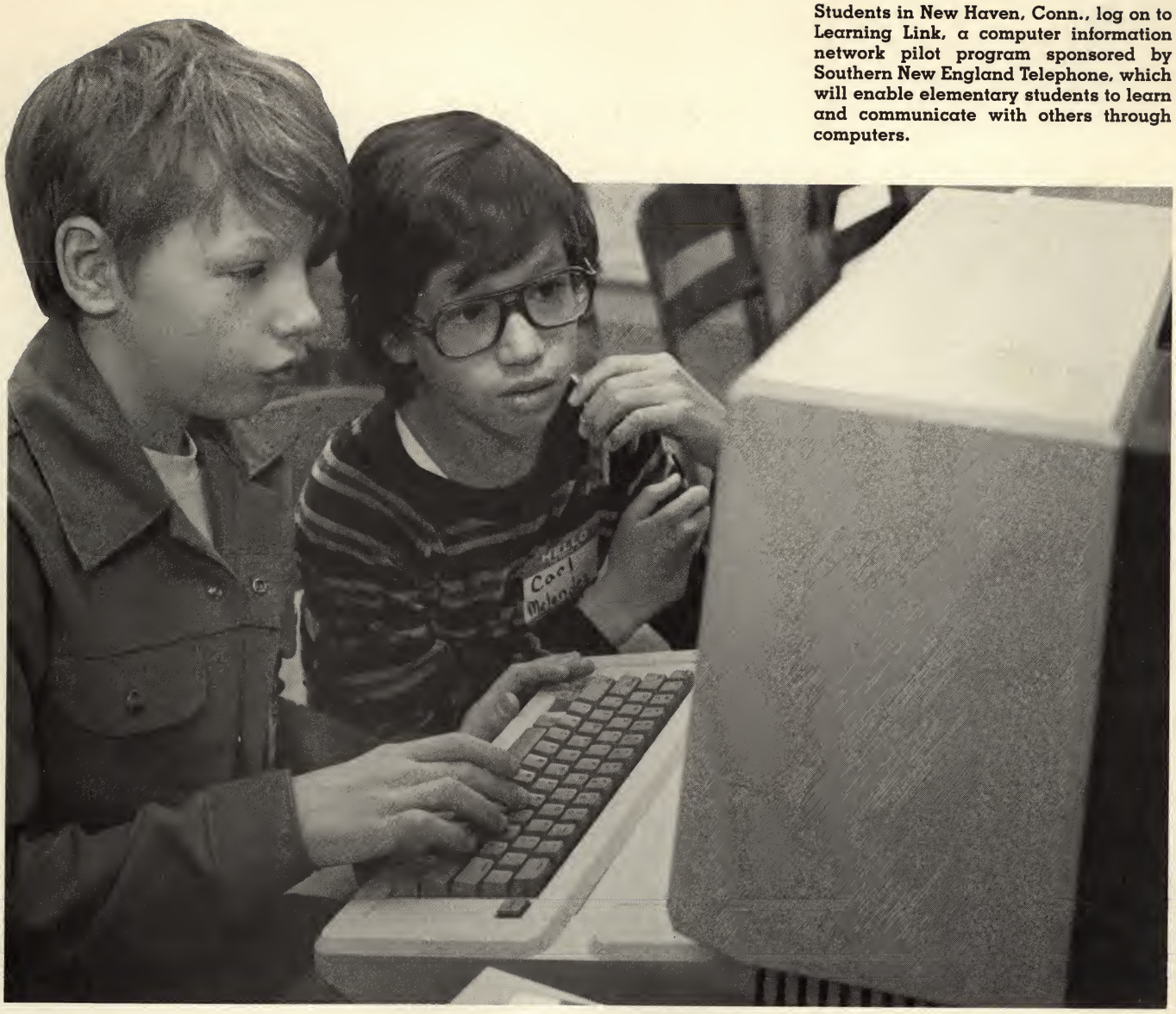
A recent nationwide survey of computer use in schools by McGraw-Hill Research, showed that nine of ten teachers said their school owns or plans to buy a computer, but that less than one in twenty owns or plans to buy modems and telecommunications software. "Being able to afford access is a problem for most schools," agrees Mary Vaughn, CompuServe product marketing manager. "Our aim is — through some pricing policies we're looking at to give special rates to schools — to make computerized information widely available. Since most people still don't have home computers or modems, school may be the only place that many youngsters get a chance to access networks."

Online Encyclopedia Favored Over Print

To uninitiated adults, accessing a computer network is often viewed as a complicated, anxiety-producing task. It's logical to assume, therefore, that children would find the experience even more harrowing. Not so, says Cindy Silvani-Lacey, a CompuServe educational product marketing specialist. "We haven't found a great deal of difference between adults and children learning to access CompuServe," she remarks. "In fact, younger people often learn more quickly because they aren't usually as apprehensive as adults."

Results of a study conducted by Professor Susan Tyler Eastman and others in the Department of Telecommunications at Indiana University showed that the eighth-graders they observed enjoyed network learning. Nearly all the children in Eastman's study who accessed CompuServe's online Grolier's Academic American Encyclopedia as part of a theme-writing assigment were enthusiastic. "Wow! Neat-o! That's total!" were typical comments recorded by observers of these rural youngsters who lacked previous computer experience. Eastman says that the students said they preferred learning from computers over books because they claimed computers were easier to use — despite clear evidence to the contrary.

Obviously, in most cases it's easier to open a book than to conduct an online search. But mastering the steps necessary to locate, capture and make hard copies of information was a source of great pride to many of the children studied. "During the first week of computer use, the students redefined the project's goal from 'getting information to write a theme' to 'getting the longest printout,' " explains Eastman.



Students in New Haven, Conn., log on to Learning Link, a computer information network pilot program sponsored by Southern New England Telephone, which will enable elementary students to learn and communicate with others through computers.

"Students bragged to each other, 'I'm getting a lot of information today.' "

Because the level of research required of junior high and high school students is generally fairly elementary, the cost associated with with accessing commercial databases does not usually justify the means. And since many students lack the basic skills to conduct simple searches of library reference books, only the most motivated are likely to go beyond an online look at Grolier's or other standard encyclopedias. Knowledge may very well be power for students searching for it electronically, but it's balanced by another, even stronger consideration — time is money.

Typical online searches may cost $10, $15 or more, depending on the cost of access and connect time. Multiplying that cost-per-student times a typical class size of 35 results in some fairly expensive reports. Needless to say, most students are discouraged from leisurely perusals of electronic data. And while menu-driven databases offer beginners a step-by-step method of working through the procedures, they also use valuable time that might be better spent instructing students offline. According to Silvani-Lacey, CompuServe is moving away from menu-driven offerings to searchable databases. "This type of database is more efficient in terms of connect time — provided the user knows how to conduct a search," Silvani-Lacey explains. "The information providers putting up the databases will provide training materials to users."

Electronic Mail and Online Interviews

Less expensive and perhaps more practical for kids than online accessing of information that's readily available in school reference books, is using networks to improve communication skills. Dr. David Heigle, district microcomputer specialist for Upper Arlington, Ohio plans to set up a system to do all that and more for gifted and learning disabled children. Through a two-year writing project involving 900 students, Heigle expects to motivate children to communicate in a dynamic fashion. "We expect to upload and download stories so various students can work on them, interview children's authors online with many students participating, and use the network to post assignments, send messages and exchange ideas," he says. "So many times kids are asked to write just to please the teacher. I'm excited about them using the network to engage in real communication because they want to, not because they have to."

Computer networks can also help youngsters connect — literally — with others who have special interests or needs. The value of networks to handi-

capped youngsters has been well-documented but, to date, there are few online special interest groups (SIGs) for children. Heigle feels confident that children in his school district are eager to set up SIGs. "My phone has been ringing off the hook with calls from parents and kids who want to get involved with the network," he reports. "Right after a local newspaper article was published announcing our educational network, I got a call from a child who's a bird-watcher who wants to get in touch with other kids who share his interest."

The few networks for children that have been set up have met with enthusiastic acceptance. Among these is a San Diego-based 24-hour network for children called The Kids' Message System (619/578-2646) and a Richardson, Texas board called The Turtle Bulletin Board (214/783-7548) for those interested in Logo. Both boards are free (except for the cost of the phone call) and offer electronic mail, software exchanges and — at the 7 a.m. to 7 p.m. Turtle Bulletin Board — "a few other goodies we are experimenting with," according to operator Jim Muller, who also runs The Young People's Logo Association.

Despite a scattering of free children's networks, until kids begin paying their own bills it's unlikely that CompuServe or other commercial time-sharing services will set up SIGs specifically for children. Presently, according to Cindy Silvani-Lacey, plans are in the works for a Scholastic Magazine K-Net SIG but since many more adults than children use CompuServe, she doesn't expect it to draw the response that adult SIGs have received.

This paucity of children's forums hasn't deterred those with special interests, however. She estimates that about 10 percent of CompuServe users are children who log on to CB and to forums devoted to such topics as games and sports. "We do have a number of education forums either online or in the works for teachers and parents who want to exchange information and then apply what they learn to their children or students," she explains. "CompuServe is moving away from closed special interest groups to making forums accessible to all. We expect this open access to generate interest among children, parents, teachers — everyone interested in obtaining and exchanging information."

At this point, the use of computer networks by children is still in its infancy. However, once the problems of funding, training and equipment are worked out, it's quite possible that a T — telecommunications — may be added to the three Rs long regarded as the mainstays of American education.

Education Forums and Databases for Adults

Among the education-related current and proposed CompuServe offerings are:

• **Association for the Development of Computer-Based Instruction (ADCIS)** — a proposed forum that will promote and facilitate the exchange of information, programs and materials related to computer-based instruction. Membership, newsletter and conference information will be posted and online conferences will be encouraged.

• **American Association of Colleges for Teacher Education (AACTE)** — a proposed forum devoted to electronic networking on issues and concerns in teacher education. Online access to the AACTE newsletter will be available.

• **Educational Products Information Exchange Institute (EPIE)** — a proposed forum offering an electronic database containing thousands of evaluations of educational software as well as program producers and distributors. News and ideas about educational courseware, products and services will be exchanged.

• **ERIC/IRIS/SMEAC** databases will offer bibliographic information on publications related to educational research, administration and instruction.

• **Educators' SIG** — a large educational forum for anyone interested in computers and education. Forum sections include telecommunications, administration, LOGO, special education, computer-assisted instruction, computer literacy and other topics. Some messages include information on job possibilities in education. To access this forum directly, type GO HOM-137 at any CompuServe ! prompt.

• **Educational Research Forum** — for those who want to share, compare and comment on educational research findings. It features 10 sections including educational administration and medical education, as well as special CB online conference areas and databases available on all forums. To access the Educational Research Forum directly, type GO HOM-28 at any CompuServe ! prompt.

• **The Multiple Choice, or TMC**, is popular with children and adults of all ages. Designed in a game format, TMC includes many different tests for checking your knowledge including IQ tests, Miller Analogies tests, trivia of all types, brain teasers and multiple choice tests for kids. "So You Think You Know Me!" and "Witty Write-ins" are especially popular. TMC can be selected from the educational menu or by typing GO TMC-1 at any prompt.

• **Handicapped Users Database** distributes information about handicapped persons. Users may also access section 8 of the Issues SIG to communicate through the message board and online conference area. Regular database features include reviews and reports on microcomputers, peripherals, software, reading devices and other news of interest, as well as personally-written profiles of how many handicapped users make use of their computers. To access the database, type GO HUD-1 at any prompt. To use the message board and online conference area, type GO HOM-132.

COMPUSERVE FOR COLLEGE-BOUND

Making the decision about which college to attend can be difficult, but the Consumer Information Service can offer invaluable assistance to high-school students and their parents through two online services, The College Board and The College Press Service.

The College Board (GO TCB at the ! prompt) is operated by the College Entrance Examination Board, the same organization that administers the Scholastic Aptitude Test (SAT) required for admission to most colleges and universities.

Does special preparation for the college board examinations help students increase their scores? The publishers of the tests tackle this frequently asked question and offer six specific points students should consider when preparing for the SAT. In addition, the Advanced Placement program, which allows secondary-school students to complete college level courses for college credit while still in high school, is thoroughly explained. There is also a valuable listing of important dates, so students will be sure to complete necessary testing prior to university admission deadlines.

Before deciding where all that tuition money will be spent, students and their parents need a plan. Under the College Planning section, they will receive hints on how *not* to choose a college, and look at some of the myths surrounding college selection and admission. For instance, is there only one college that will satisfy all of a student's needs, or are all colleges really the same?

Adults who are considering returning to college would do well to review the section on Adult Education in The College Board. In addition to an overview of learning alternatives for adults, the section addresses the 10 most common fears of adults who are considering returning to school

The College Board also offers detailed, easy-to-understand explanations of the complicated and ever-changing financial aid programs now available to college students. And for those who want more information, a listing of college-planning publications is presented.

Current news and information about a number of specific colleges and universities are available from The College Press Service (GO CPS). Launched as a national college news service for collegiate publications, CPS has played an important part in keeping students and parents informed of campus events and trends, as well as specific admission and recruitment policies, federal and state education legislation, financial aid information, court decisions, classroom trends, funding patterns, faculty and administrative affairs, and student goings-on.

Updated weekly, The College Press Service presents concise bulletins under Campus News Briefs or news stories under Campus News in Depth.

With the start of the school year in September, CPS will offer online National Campus Classifieds, where individuals may post notices, advertisements or messages of 50 words or less for as little as $9 a week. (This is the high-tech way to catch a ride home for Thanksgiving!)

So before writing away for hundreds of college catalogs or raiding the local bookstore for SAT preparation guides, enlist CompuServe to help make one of the biggest decisions of a lifetime a little easier.

—Cathryn Conroy

INSIDE THE ELECTRONIC MALL

Dear CompuServe subscriber:

The response to the Electronic Mall continues to be very positive, indicating that CompuServe subscribers find the Mall to be a convenient and reliable way to shop. To further expand the Mall's value, we are constantly adding new merchants to better serve CompuServe subscribers.

This month we want to formally welcome Commodore Business Machines, which has taken out space in the Mall to display its complete line of microcomputing hardware and sell a wide variety of educational, entertainment and business-related software for Commodore micros.

Grolier Electronic Publishing, a familiar name to CompuServe subscribers, recently set up shop in the Book Bazaar and now is offering three encyclopedia sets, including *The New Book of Knowledge*, *The Academic American* and *The Encyclopedia Americana*. Also, Grolier offers a variety of authoritative reference sets, including *The Microcomputer Games Library* and *The Introductory MicroComputer Library*.

Two new magazines are located in the Magazine Kiosk: *Omni* and *Business Computing*. *Omni* magazine provides subscribers with the finest in art, science fiction and the wonders of life. *Business Computing*, published for the benefit of IBM PC users, regularly provides important insights into how PCs can be used profitably in business management.

When considering a trip away from the office, CompuServe subscribers should make a point of visiting WorldWide Exchange in the Travel Agency. WWE supports an extensive database of properties, yachts and recreational vehicles available for rent or lease, usually in exotic places.

Last, but certainly not least in importance, Software Discounters of America joined the Software shop and now offers an online catalog featuring 100 popular software titles for the Commodore 64 and more than 150 titles for the Atari family of micros.

We continue to receive questions from subscribers about the Mall, its tenants and how it should be used. The rest of this letter is devoted to answering one question that has been frequently asked.

Because the Mall features so many stores with such extensive offerings, would it be possible to provide a directory of some sort that would describe each store and its specialty?

Yes, and we hope you find the directory that follows useful.

I Am, Your Faithful, Mall Manager

ELECTRONIC MALL DIRECTORY

I = You may request information.
O = You may place orders.

BOOK BAZAAR
BB Bantam Books O
BT Big T Parts Company O
DP dilithium Press O
GE Grolier Electronic Publishing O
KP The Knapp Press O
MH McGraw-Hill Computer Books O
SM Small Computer Book Club O
WB Waldenbooks O
WD Woman's Day Books O

NEWSSTAND
DJ Asian Wall Street Journal Weekly O
DJ National Business Employment Weekly O
NN NewsNet I
DJ Wall Street Journal O
US USA Today I

RECORD EMPORIUM
RC RCA Record Clubs I
RW Record World IO

FINANCIAL MARKET
AXC American Express Cardmember Services I
BA Bank of America I
DJ Barron's O
CP Colonial Penn I
HD Heinold Commodities I
EF E. F. Hutton I
MT Manufacturers Hanover Trust I
MET Metropolitan Insurance I
MA Midwest Associates I
PT The Program Store I
SI Select Information Exchange O
MU Max Ule and Co. I
VG The Vanguard Group I

MAGAZINE KIOSK
BC Business Computing O
CBS CBS Magazines IO
CW CW Communications O
HB Harvard Business Review IO
ME Magazine Entree O
OM Omni Magazine I
RP Rodale Press IO
ZD Ziff-Davis Special Interest Magazines O

GARDENING SHED
SB Stark Brothers Nurseries & Orchards Co. IO

THE GENERAL STORE
AXM American Express Shopping IO
BL Bloomingdale's O
CU Comp-U-Store I
SR Sears, Roebuck and Co. IO
WA W.A. Taylor I

SOFTWARE SHOP
CC CDEX Corp. **IO**
CS Commodore Business Systems **O**
EH 800-Software Inc. **IO**
IS Innovative Software **O**
MS Microsoft Corp. **I**
MI Miracle Computing **O**
SC Sim Computer Products **O**
SS Simon & Schuster **O**
SA Software Advisor **IO**
SD Software Discounters of America **O**
SU SuperSoft **O**
VC VisiCorp **I**

MICRO MART
AS A.S.T. Research Inc. **I**
DE Digital Equipment Corp. **I**
HTH Heathkit **IO**
IN Inmac Micro Supplies **I**
MO Misco Computer Supplies **O**
NV Novation Inc. **I**
PE Pan American Electronics **O**
PP Practical Peripherals **I**

TRAVEL AGENCY
AA American Airlines **I**
AXT Amex Vacation Store **I**
BU Buick **I**
OA Official Airline Guides **O**
WL WorldWide Exchange **IO**

PHOTO BOOTH
FS 47th Street Photo **IO**
KO Kodak **I**
CL Professional Color Labs **IO**

RATE INCREASE DUE TO AT&T SURCHARGE

Most of our readers know by now that a communications surcharge of 25 cents per hour is being assessed customers who access CompuServe through the CompuServe communication network. (CompuServe's computer services rates for its many computer-based product offerings and its standard and prime service rates remain the same.) However, many of you probably don't know why the surcharge (which went into effect July 1 and is reflected in your July billing notice) is being assessed.

The reason for the surcharge is directly linked to last year's divestiture of AT&T and the subsequent request of Congress by AT&T and local operating companies for permission to restructure tariffs on communications access charges. Congress passed legislation authorizing the restructuring of tariffs, but due to protests against the legislation, the implementation of new rates was delayed for several months. The increases for switched access charges went into effect May 25, increasing the costs of local dial lines by 15 percent each, according to Clark Woodford, CompuServe's vice president of telecommunications services.

Additionally, special access service, which includes leased lines, multi-dropped lines, and foreign exchange lines, will continue to be reviewed by the Federal Communications Commission for implementation later. The special access service was expected to be in effect in July and would represent a 20 percent increase in CompuServe's leased lines between communication nodes and a 200 percent jump in costs for providing foreign exchange services, Woodford says. The 25-cent-per-hour AT&T pass-through charge includes the rate increases for the switched access charges and the special access service.

CompuServe regrets having to pass the AT&T network longline rate increase along to customers, but as Woodford points out, hopes that by doing so, the overall high level of service to customers will be maintained.

CompuServe opposes legislation permitting the increase of network longline rates. Says Woodford, "We don't think there should be an increase in costs for the end user just because of divestiture, but that is what the government is allowing to happen."

If you share the concern to hold down the cost of data communications rates, CompuServe urges you to make your views known by writing your local, state and federal elected government representatives. Our collective voices may help to keep communications costs at a reasonable level.

GETTING STARTED ON COMPUSERVE

You can find everything you need to begin using either CompuServe's Consumer Information Service or Executive Information Service at most computer stores and electronic equipment dealers.

You will need: an inexpensive "modem" to link your computer with your phone; either a CompuServe Consumer Information Service Starter Kit or Executive Information Service Subscription Kit; and, in some cases, easy-to-use software (your computer salesman will advise you).

In either Kit you'll find:

- **A complete User's Guide** in durable 3-ring binder.
- **Connect time to acquaint yourself with the service.**
- **Subscription Instructions:**
- With the Consumer Information Service you'll be given an exclusive ID number and password plus instructions for subscribing "online."
- With the Executive Information Service, you'll be given a serial number, an agreement number, and instructions for obtaining your ID number and password.
- **An introductory subscription to the monthly computer magazine *Online Today*.**

For an informative, full length brochure, call 800-848-8199.
In Ohio, call 614-457-0802.

KAYPRO USERS COMMUNICATE

"Sorry your upload is still messed up. Have you tried using one of the EXEC programs? BUFEXC will run on all Kaypros (so I'm told). Read BUFEXC.DOC in XA1 for info on how to download it and use it. Hope this helps." — Ira Gerson, sysop.

Solving problems like this is all in a day's work for Ira Gerson and his father, Al, the sysops of the new Kaypro Forum. To enter the forum, type GO PCS-25 at any ! prompt in the Consumer Information Service. You may also access it from the Personal Computing Special Interest Groups main menu.

The Kaypro Forum is one of the activities of a 15,000-member national Kaypro Users' Group. Nearly 200 local Kaypro groups are now using the forum.

Members represent various levels of computer expertise, including many computer novices. Several members are interested in scientific applications, and many writers use their Kaypros for word processing.

Through the message board, members offer suggestions or request help on technical questions, and exchange information on buying various Kaypro models, selecting word-processing software and using modems.

Online conferences are planned for the Kaypro Forum in the near future. To communicate with other users in the conference mode, select option 6 at the function menu.

Kaypro Forum members can access the varied information in the XA databases by typing XA at the function menu, and then choosing from sections 0 through 5. In section 1, "Utilities/Communications," there are informational files about modems. Section 4, "Hardware," has a file about adding line-drawing graphics and inverse video to the Kaypro. Section 5, "Software," contains files about software applications.

If you choose the "browse" option, you'll quickly learn the contents of each section. You have the option of reading a file, downloading it to your own computer or returning to the top access menu.

FAMILY MATTERS

"We've talked online with families in western Europe and provided online counseling to an American family in Saudi Arabia," says Dr. Robert L. Lindamood, sysop and founding father of the Family Matters Forum. Through the forum, Lindamood has advised hundreds of families nationwide, and he believes this forum is revolutionizing the ways families obtain counseling services.

Through Family Matters, families can access information about family life, submit questions to an online Q & A section, take short courses, have private counseling and interact with other forum members. To access the Family Matters Forum, type GO HOM-144 at any ! prompt on the Consumer Information Service.

"It's my rendition of everything you need to know about parenting and family life," says Lindamood, a Methodist minister with master's degrees in both theology and psychology and a doctorate in adult education and counseling. Lindamood is president of FAMILIAE Inc., a Columbus-based consulting organization providing training programs and comprehensive family services to corporate employees and their families.

Family Matters traces its roots back to December 1982, when Lindamood decided his draft for a family-life reference book could be published as an online database. He calls it dataFAMILIAE, meaning information "of or for the family." To find the family information and support materials, type GO PFL at any ! prompt on the Consumer Service. The materials in the Parenting and Family Life database serve as an educational reference tool for those who participate in the Family Matters Forum.

The Parenting and Family Life main menu offers an overview of dataFAMILIAE, instructions for using the service, detailed information about family-living topics, interrogatories, short courses and consultation. From the five family-living topics, you'll learn how to improve communication between family members, how to make family decisions and receive advice on household managment.

For each family-living topic, Lindamood has chosen a qualified professional to present information and answer questions. Dr. Scott Meier, an Illinois psychologist, manages "Functioning Mentally." This area includes burnout depression and vocational interest development. In "Functioning Physically," Linda Callahan, a registered dietician based in Tennessee, addresses physiological and nutritional issues, including diet and weight

at the Forums

control. Dr. Greg Romanski, a Roman Catholic priest from Austin, Texas, is responsible for "Nurturing Moral Development." Rutgers professor and marriage/family therapist Dr. Gerald Gluck handles the section called "Fitting Together as a Family." Two specialists in sociology and social work, Betsy Backe and Donna Rusch, both based in New Orleans, are responsible for the "Special Family Matters" section.

"Ideally, you'll be able to come into the forum with a problem and be referred to one of these specialists. You'll be able to get information when you need it — from an expert, inexpensively," says Lindamood.

The counseling component of the Family Matters Forum operates much like an online conference between two people. If you desire counseling, you can leave a private message for Lindamood (when addressing it to him, type "sysop" after his name). He'll respond to you through Email and tell you what times he has available. After choosing the best time for you, you simply "meet" him in the online Parenting and Family Life conference room. There is a fee for one-on-one consultations.

General conferences for members of the Family Matters Forum are scheduled once or twice each month during the fall and winter. Discussion topics range from alcoholism to sex education in the family. The conferences are usually on Sunday evenings. Check the forum's message board for details of upcoming conferences.

On the message board, members exchange opinions on such subjects as stress, problems of single parenting, adoption and child abuse. Some of these informal exchanges of information lead to topics for membership conferences.

Another interactive aspect of the service is the Q & A feature. On the Parenting and Family Life main menu (GO PFL at any ! prompt), you can choose item 8, "Interrogatories." If you would like to submit a question, select item 2 on the Interrogatories menu. Inquiries of a specific nature (pertaining only to your family) will be forwarded to the counseling/consultation section of the database. From the inquiries of a general nature, dataFAMILIAE selects and answers one question each week. Answers are posted under item 1 on the Interrogatories menu.

For those who desire in-depth information on a subject, Lindamood and his team of experts devised "Short Courses," which can be found on the Parenting and Family Life main menu. The courses include information, discussion questions, advice and practical application exercises. Lindamood adds new courses to the database periodically. Current topics include "Choosing Child Care With Confidence," "To Marry or Not To Marry," "To Parent or Not To Parent," and "Birth to Two Years: Developing Baby's Thinking."

In the next few months, Lindamood hopes to add another component to the Family Matters Forum — "Family Night Activities." These activities would last for one to two hours and be educational in nature. His objective is to use the computer to draw a family together.

— Mary Mitchell

CHANGED YOUR PASSWORD LATELY?

The CompuServe Information Service urges its customers to change their password(s) at least once a month.

The password should be at least eight characters comprised of two unrelated words separated by a symbol, for example: HOUSE*MAGNET.

It never hurts to be safe, but almost always hurts to be sorry. By changing your password frequently, you eliminate the risk of someone else illegally using your account. Changing your password correctly and often means never having to say you're sorry.

YOU CAN WIN TEN HOURS CONNECT TIME

UPDATE-D Gift of Time

The CompuServe Information Service and *Online Today* would like to use your input. Not your program input, but your input on practical, useful, creative ways of using CompuServe.

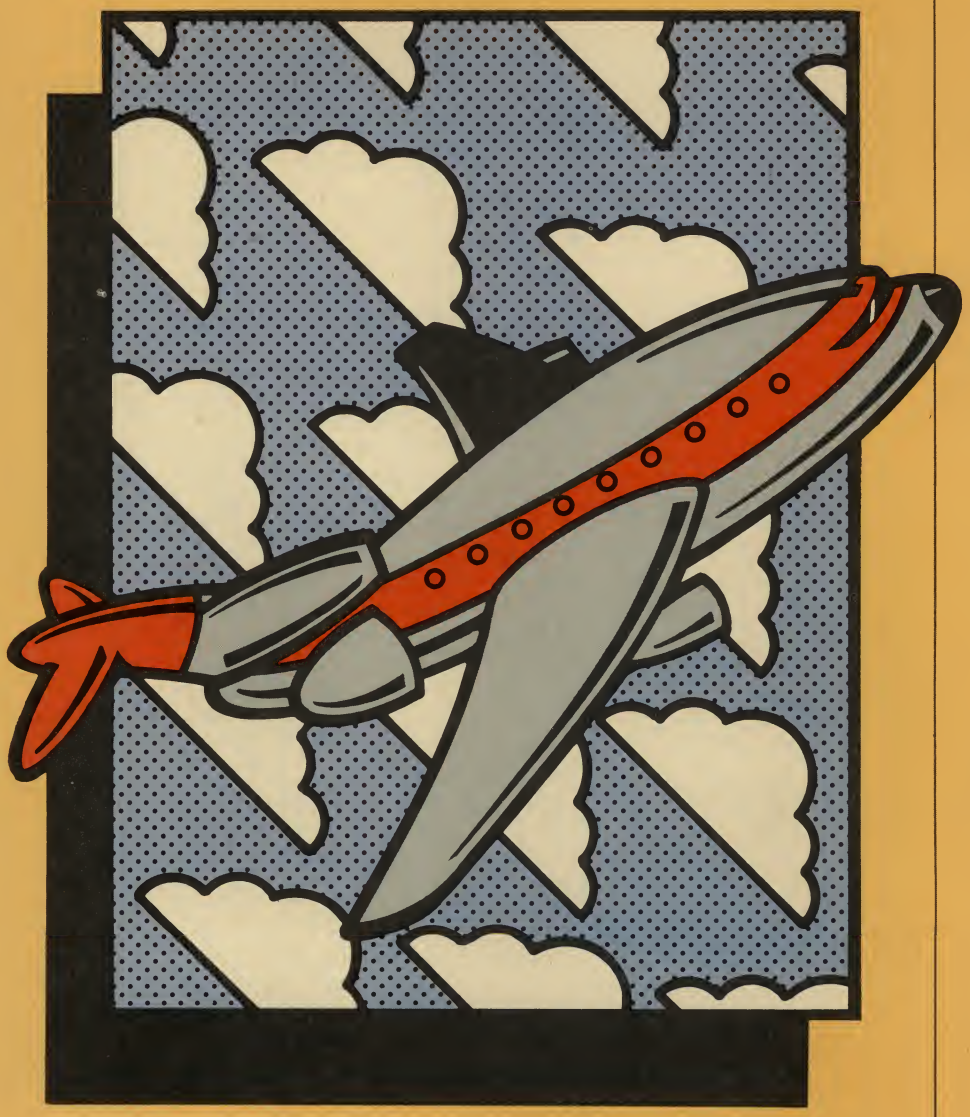
Online Today offers all interested and interesting subscribers the chance to write a 200-word essay on how they use the information service. For example, do you use CompuServe in your business or to write programs? Do you use CompuServe in education or for professional activities? How does your family use CompuServe?

Your essay should be typed, double-spaced and should either be sent through the postal service to 5000 Arlington Centre Boulevard, P.O. Box 20212, Columbus, Ohio 43220, or by Email to 70003,1325.

Should we decide to use your column, you will receive 10 hours of standard service connect time (a $60 value), a byline and the fun of seeing your column (and photo if possible) printed free in *Online Today*.

Copy is due the first of each month preceding the cover date. Please include your full name, address and User ID number. *Online Today* reserves the right to edit all material.

ONLINE AIRLINE RESERVATIONS



Starting in October, CompuServe Information Service subscribers will have access to a service offering flight availability and reservations options for any scheduled airline in the world. The Travel Shopper is offered by Trans World Airlines.

"This will be the first time such comprehensive worldwide airline information will be offered directly to the consumer," says Richard Baker, CompuServe's corporate communications director. The Travel Shopper will be available on both the Executive and Consumer Information Services.

Information will be provided to subscribers in easy-to-follow steps in user-friendly language. Users will be able to analyze the flight schedules of major domestic and world airlines, scan for airfare bargains and order tickets electronically. Subscribers can arrange for tickets to be issued by a travel agency, through the mail or at any participating airline ticket office.

"While it's a TWA-automated system, we have structured our program to highlight the services of travel agencies for ticketing, and we believe this system will benefit agency productivity, as well as generate new business," says Peter T. McHugh, TWA's vice president of passenger marketing.

The Travel Shopper's flexible design will offer both a "browse" and a "book" mode. In browse mode, the user can search among possible flights and fares to determine the optimum itinerary. In book mode, actual seat reservations can be made. While browse mode will be available to all subscribers, only those subscribers who choose to enroll in The Travel Shopper service will be able to book a seat.

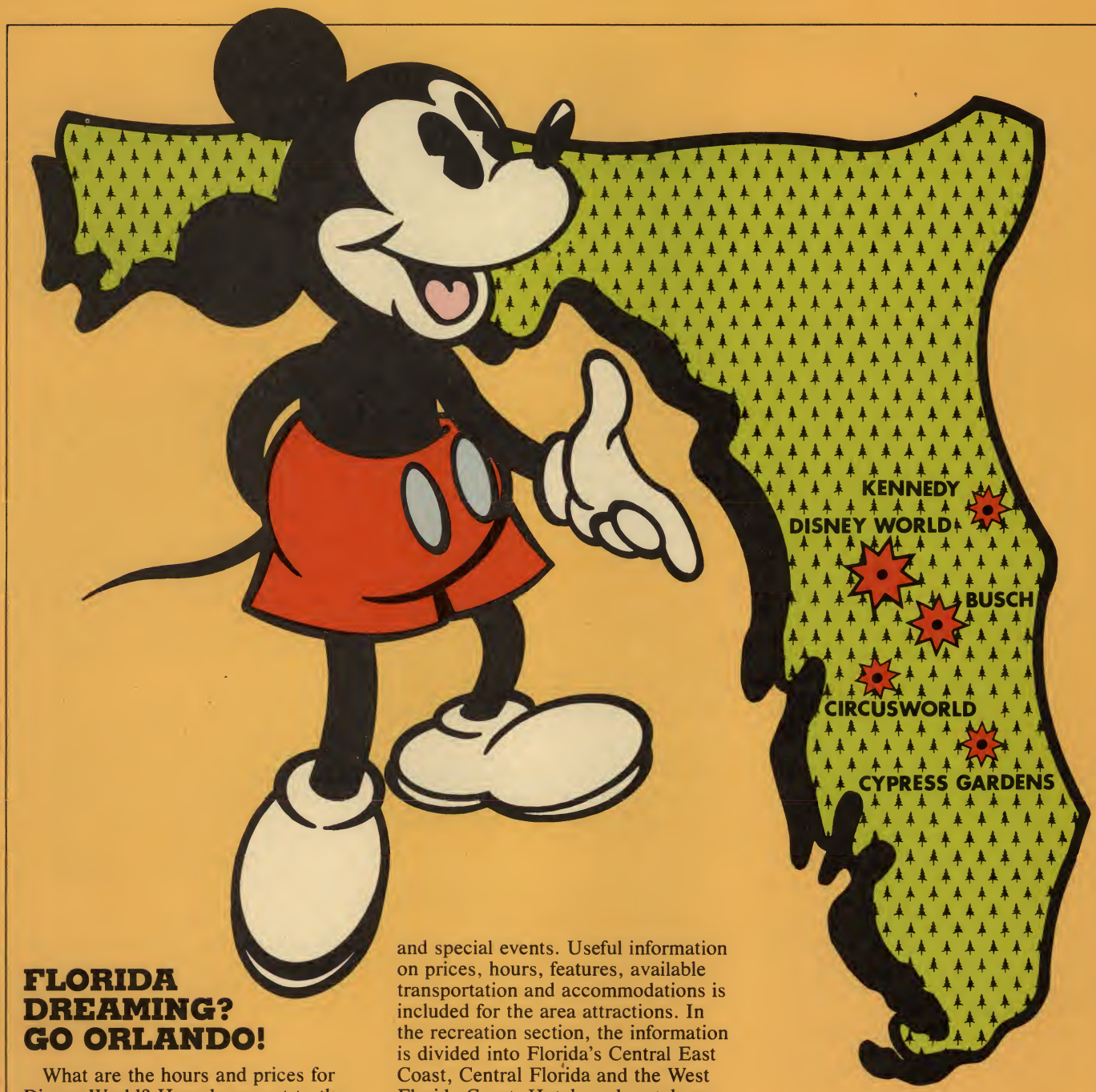
"Membership in The Travel Shopper is simply a mechanism whereby TWA, CompuServe and the subscriber can be assured that the system is being used properly," says Mary Vaughn, CompuServe's marketing manager for travel products. "The membership option is open to all CompuServe subscribers at no cost. There are no dues involved, and membership applications can be made online."

To become a member of The Travel Shopper system, a subscriber need only enter the command GO TWA at any ! prompt in the Consumer Information Service. There, the user will find an in-depth description of the upcoming service and an application for Travel Shopper membership. Jerry Loffman, CompuServe's advertising and promotion specialist says, "The enrollment process is being made available now so that subscribers will be able to make full use of the booking option as soon as TWA's service is live."

In addition to booking privileges, membership in The Travel Shopper gives the subscriber automatic membership in TWA's Frequent Flyer Bonus (FFB) program. FFB provides travelers with bonus mileage credit for the number of miles they fly. Credit is also given for staying at Marriott, Hilton International and Vista International hotels, using an auto from Hertz Rent-A-Car or flying on various regional airlines, such as Air Midwest, and international carriers like Austrian Airlines.

The cost of using The Travel Shopper service will range between $20 and $40 per hour, depending on the time of day the system is accessed.

— Robert Loomis



FLORIDA DREAMING? GO ORLANDO!

What are the hours and prices for Disney World? How do we get to the Kennedy Space Center? What hotels are nearby? Where is the closest Italian restaurant?

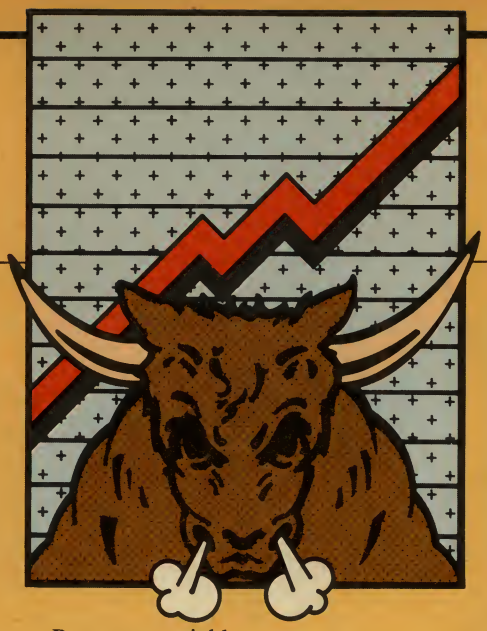
The latest addition to the travel services on the CompuServe Information Service provides all the information necessary to plan a fun-filled vacation in central Florida.

"Discover Orlando" includes information on area attractions, recreational activities, dining and entertainment spots, hotels and motels, campgrounds and special events. Useful information on prices, hours, features, available transportation and accommodations is included for the area attractions. In the recreation section, the information is divided into Florida's Central East Coast, Central Florida and the West Florida Coast. Hotels and motels are organized by areas.

If you desire additional information about a specific topic, you can communicate with the Orlando Chamber of Commerce through the User Inquiries section on the main menu. Just select "Ask the Chamber," enter your name, address and phone number, and store your message for the chamber. A representative will then respond to your inquiry. You also may order the chamber-sponsored magazine.

The Discover Orlando service will be updated and expanded continuously, adding new features of interest not only to vacationers but also to relocators, investors and potential residents.

You can access Discover Orlando on the Home Travel menu, or by entering GO ORL at any ! prompt in the Information Service.



MANAGING YOUR PORTFOLIO

Some videotex services offer stock quotes but little other financial information. If you want to do analysis on the data, you are expected to buy special software for your computer to handle quote retrieval, portfolio valuation or charting. At $300 to $2,000 per program, you are soon locked into whatever hardware configuration is currently in vogue with software authors.

The problem is that not everyone trades frequently enough to justify a large layout in investment software, and almost all such software is written for the Apple or the IBM PC. This is unfortunate for those who want to make decisions while on the road with a TRS-80 Model 100. If you are one of these people, you may want to use CompuServe for some of your investment analysis needs.

CompuServe's online investment tools offer analytical services that are not tied to any particular computer. In addition to accessing quotes, you can view the current value of securities in your portfolio, do a return analysis on them, view a table of all the options currently trading on a given stock or index, screen the database of 46,000 active securities for those that meet your investment objectives, or look at statistics on market price for the time period of your choice.

Portfolio Valuation

Portfolio Valuation lets you report up to 250 securities. When you first initialize your portfolio input file, you are asked for the number of shares you hold and the price at which you bought them. (The price is optional.) You also can use any pricing date of your choice to assess your portfolio's value.

The report arranges your securities according to type. For each issue, it tells you:

- Ticker symbol.
- Number of shares held. (For options, number of contracts at 100 shares per contract; for bonds, thousands of dollars of face value.)
- Market close for pricing day reported.
- Market value of holding on the pricing date requested.
- Price/earnings ratio using market close on pricing date and 12-month.
- Earnings per share.
- Percentage yield.
- What percentage of the total portfolio that holding accounts for.
- Amount you paid (per issue) at the time you bought it. (If you don't supply this information when you create your portfolio input file, it's omitted from the report.)
- Original value of holding: number of shares multiplied by the cost per share. (If you didn't supply the cost in your portfolio input file, this is omitted from the report.)

If you bought shares of the same stock at different prices, you can include the stock multiple times in your portfolio, one listing for each purchase price. This helps you monitor unrealized gains and losses for tax purposes.

Return Analysis

Return Analysis lets you compare the relative gain or loss experienced by securities in your portfolio over a constant period of time. You may include up to 30 securities in a single report.

A Return Analysis report displays each security's closing price for the beginning day and the ending day specified, the value $1,000 invested in that security on the starting day would have as of the ending day, the percentage gain or loss, and the annualized percentage gain or loss. Prices used are fully adjusted for splits and stock distributions. You have the option of deciding whether to include cash dividends as part of the return.

Charting

CompuServe offers two charting programs to graphically portray market price activity. If you are running a communications package that supports the Semigraphics 4 protocol, you can chart 16 days, weeks or months. (CompuServe's VIDTEX supports Semigraphics 4 on the Commodore PET and 64, Atari 400 and 800, TRS-80 Color Computer, IBM PC, and Osborne.) Charts appear in color on those machines that support color. If you are using a Telidon or NAPLPS terminal, such as the AT&T Sceptre, you can chart 60 days, weeks or months.

Options Profile

The Options Profile gives an overview of the options outstanding for a stock or index. For the pricing day of your choice, you can display the market close for the underlying issue along with a grid of prices for the puts and calls trading on it.

Securities Screening

With Securities Screening, you can quickly find which of the 46,000 active issues listed in MicroQuote meet your investment objectives to round out your own portfolio. Depending on the security type you are looking for, you can specify search criteria on exchange, beta, latest market price, open interest, maturity date, yield to maturity, expiration date, 12-month earnings per share, price/earnings ratio, shares outstanding and amount outstanding.

Pricing Statistics

Pricing Statistics helps you assess the volatility of an issue's price over the time period you specify. The report tells you the highest high price, lowest low price, highest and lowest close, percent change from beginning to end, and highest and lowest volume. You also receive the mean and standard deviation of the high, low, close and volume.

Of course, CompuServe also provides a wide range of supplementary information about companies. You can use annual and quarterly financial statements from Value Line or Disclosure to evaluate a company's fundamentals, or Value Line and I/B/E/S to assess its future prospects. Corporate background is available in narrative form from Standard & Poor's and Disclosure. The clipping service in the Executive News Service helps make certain you won't miss important news stories on the companies you follow.

Whether you just need quotes or a more thorough analysis, CompuServe's Executive Service offers you the best security research tools available through videotex.

— Julie Elliot

FREEBIES FOR SHAREHOLDERS

If you are in the market to buy some stock and have access to a personal computer, a new investment service from CompuServe will be of value to you.

The new service, called Shareholder Freebies, highlights some unique benefits given to shareholders of certain companies. Subscribers to CompuServe's Consumer and Executive Information Services will have the opportunity to quickly and conveniently find out what companies offer freebies to their shareholders.

In hopes of attracting individual investors, more and more firms are providing shareholders with freebies rather than issuing cash dividends.

Once subscribers have information on an offer of interest, they can either contact the company directly or go through a broker to purchase stock.

Response to the service, which went online March 28, has been positive. "Hundreds of our financial subscribers are already using the service," says Julie Elliot, CompuServe's product specialist for financial products. "We are a valuable source of information for the individual investor, and this is one more source of information that rounds out our financial product line."

Eamonn Fingleton, an Irish-born, New York-based free-lance writer who has worked for the Merrill Lynch market-letter and contributes to *Euromoney* magazine, is the information provider for Shareholder Freebies. According to Fingleton, corporations like small individual investors because "they tend to be more loyal and less likely to be subjected to the sort of investment fashion that big institutions tend to follow," he says.

The freebies concept began in the United Kingdom as a means of giving stockholders a non-taxable return on their investment. The freebies craze became so big in England that even the staid Dundee Cemetery Co. briefly got into the act by offering a discount on caskets.

The freebies idea then spread to the United States. Elliot says tax savings are also a factor in the popularity of freebies here. "This is a way of giving the shareholder something of value that isn't subject to income taxes," she says. "In some cases the company will still pay cash dividends as well."

Fingleton reports that there are now about 100 firms with offerings — many available to U.S. investors.

Freebies can include free sample products, discounts on the purchase of merchandise, and dividend reinvestment plans, including a discount on the market price of the stock. Stocks are usually commission-free.

Offers are constantly changing, but here are some examples of freebies offered to shareholders as of October 1, 1983:

- A major hotel chain gives shareholders a 10 percent discount off the cost of a room.
- Investors receive a 10 percent discount on merchandise from a Texas-based corporation's electronic stores.
- A national supplier of pharmaceuticals sends shareholders a package containing product samples worth $65 at retail value.
- A Florida-based corporation gives investors a $145 discount on a three-piece luggage set and up to 35 percent off on brand name reading lamps.
- A major airline issues annual travel vouchers worth 25 cents for each share investors owned. Vouchers can be used to offset up to 50 percent of the cost of an air fare.
- A large British conglomerate offers a variety of benefits, including cut rates at its hotels and on the Queen Elizabeth II ocean liner and discounts on cases of J & B whiskey.

Other companies with popular shareholder product offers include a producer of cereals and snack foods, a large manufacturing and mining firm, a couple of major pharmaceutical companies and a broadcasting firm.

Several well-known companies also offer dividend reinvestment plans or discount plans.

While dividend reinvestment plans do not give shareholders discounts on merchandise or free samples, they do provide a freebie by allowing investors to reinvest their dividend checks in more of the company's stock.

In most cases, the firm pays stockbrokers' commissions and other costs associated with the transaction, and the shares are often issued at a discount price. The majority of plans also permit stockholders to invest fresh cash commission-free in the company's shares.

You can access shareholder Freebies by typing GO FRE at any ! on the Information Service.

— Robert Loomis

products

NEW PRODUCT UPDATES

Fifth Avenue Shopper for fine gifts

Remember special occasions with flowers and perfume from the Fifth Avenue Shopper.

With Fifth Avenue's easy browsing and ordering, you can send flower arrangements, through Teleflora or FTD, and favorite aromas like Halston.

To pick the right gift, access the Home Services section, or type GO FTH from any prompt in the Consumer Information Service.

Shop for spring fashions from I. Magnin

Now here's a unique way to do catalog shopping — I. Magnin and Comp-U-Store are offering catalog shopping by home computer. You can browse through the latest fashions in the I. Magnin catalog while lounging in your living room. Then, step into your study and place your order by typing a few commands.

I. Magnin offers sports clothes for a variety of occasions, from beach and pool wear to office or evening clothes. Through Comp-U-Store, your order is placed instantly and your new clothes sent directly to your home.

To shop I. Magnin, access the Home Services section, "Home Shopping/Banking," or type GO CUS from any prompt in the Consumer Information Service.

Music trivia from The Multiple Choice

Music experts now can test their knowledge. The latest addition to *Categorically Trivial* from The Multiple Choice explores the trivialities of all types of music, from Broadway to Liverpool and more.

For a try at musical trivia, just type GO TMC and select *Categorically Trivial*. Also, to keep you on your toes, the formidable *Trivial Unlimited* from TMC has been refueled with new questions to stump even the experts.

For a look at either addition, access the Home Services "Education" section, or type GO TMC from any prompt in the Consumer Information Service.

Carey Tobacco joins Comp-U-Store

E. A. Carey is offering Comp-U-Store members pipes, cigars, smokeshop accessories and the Carey Tobacco Service at a discount of at least 10 percent.

To enjoy the services of Comp-U-Store, access the Home Services section, "Home Shopping/Banking," or type GO CUS from any prompt in the Consumer Information Service.

The Direct Connection adds the Computer Resume Bank

Providers of the Direct Connection for online news and information are introducing the high-tech equivalent of a "positions wanted" classified section. TDC's Computer Resume Bank allows any CompuServe subscriber employed in the computer or communications fields to post a mini-resume for review by potential employers. Students and trainees also are permitted to post resumes.

The Computer Job Bank also offers a sample resume area and an area for reviewing resumes by job type.

To participate in the Job Bank, access the Services For Professionals area, "Communications/Data Processing," or type GO TDC from any prompt in the Consumer Information Service.

IRS introduces newsletter

A twice-monthly newsletter covering topics of interest to taxpayers is now available as part of the Videotex Library from the Internal Revenue Service. The newsletter is intended to help you anticipate the tax consequences of decisions you are facing and should be of interest on a year-round basis.

A limited number of back issues will be maintained online so you won't miss important information. There is also a section for comments and suggestions called "Feedback to IRS."

To access the IRS Videotex Library, access the Business and Finance section, "Reference Library," or type GO IRS from any prompt in the Consumer Information Service.

Military Veterans Forum now on CompuServe

Veterans of the armed forces can now access a wide range of online services and information through the new Military Veterans Forum.

The forum is managed by Dave Aldstadt, an Army veteran who served in Vietnam.

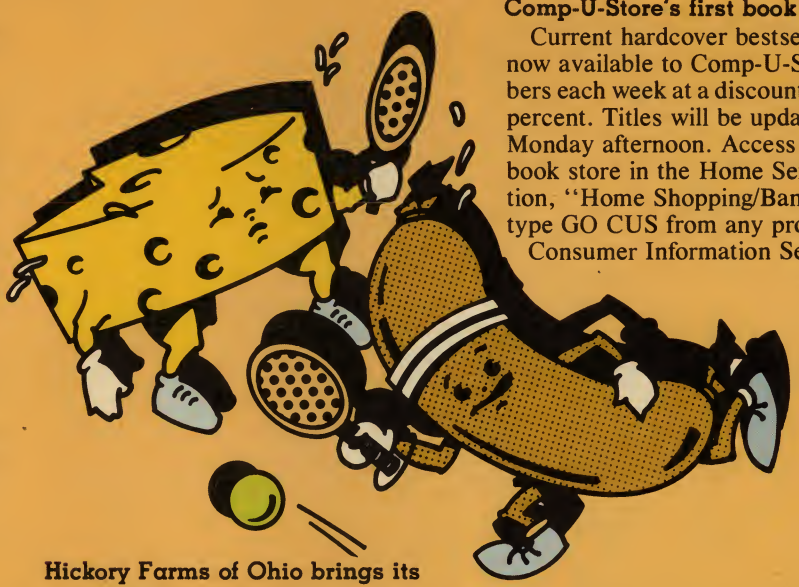
The Military Veterans Forum has sections allocated for such topics as Locator Service, Vietnam Vets, G. I. Bill and Veterans in Small Business. Membership in the forum is free and limited to veterans only.

If you are a veteran, please join us on page SFP-10 and discover a wealth of online information and assistance.

Comp-U-Store adds Stanley Tools

Stanley, the first name for quality tools and do-it-yourself project kits, offers Comp-U-Store members discounts on tools, garage door openers and a shower massage.

Stanley can make your household fix-up projects easier, and Comp-U-Store can send your Stanley tools to your front door for less. Shop in the Stanley Tool Shop soon by accessing the Home Services section, "Home Shopping/Banking," or type GO CUS from any prompt in the Consumer Information Service.



Hickory Farms of Ohio brings its wares to CompuServe

Comp-U-Store is introducing Hickory Farms of Ohio to members at a 10 percent discount.

Comp-U-Store is now offering a variety of shops in which to browse or order gifts right from your living room.

Hickory Farms on Comp-U-Store is a perfect place to find gift boxes of cheese or combination boxes of cheese with sausage and mustard. Hickory Farms also offers honey, cashews and pecans or specialty chocolates.

Do your shopping at home with Comp-U-Store and Hickory Farms of Ohio by accessing the Home Services section, "Home Shopping/Banking," or typing GO CUS from any prompt in the Consumer Information Service.

Dow Jones Publications come to Comp-U-Mall

Comp-U-Store has added another shop to the Comp-U-Mall.

Comp-U-Store members can now arrange for home or office delivery of *The Wall Street Journal*, *Barron's* and *National Business Employment Weekly* through their computers, 24 hours a day.

With each subscription order, Comp-U-Store includes a $10 gift certificate valid toward any purchase from Comp-U-Store.

For more information, access the Home Services section, "Home Shopping/Banking," or type GO CUS from any prompt in the Consumer Information Service.

Comp-U-Store's first book shop open

Current hardcover bestsellers are now available to Comp-U-Store members each week at a discount of up to 25 percent. Titles will be updated every Monday afternoon. Access the new book store in the Home Services section, "Home Shopping/Banking," or type GO CUS from any prompt in the Consumer Information Service.

SAVINGS-SCAN™ — We're good sports

SAVINGS-SCAN™ is sell-abrating spring and summer with the addition of a greatly expanded listing of sporting equipment.

High-quality merchandise is now available for such leisurely pursuits as tennis, racquetball, golf, fishing, boating and movies.

Order now for those special occasions. We'll gift wrap movies and cigars and enclose a card bearing your message.

All this and more . . . available at discount prices. And that's no fish story. Be a sport — enter GO SAV from any prompt.

Visit the Electronic Mall soon

Since the introduction of the Electronic Mall™ on April 2, CompuServe subscribers have had the opportunity to shop and seek information from more than 60 nationally prominent businesses. Designed for the benefit of CompuServe subscribers, the Mall makes shopping fun and convenient, and available at any time of the day or night. Because there is no membership fee or surcharge, the Mall presents an economic way to shop for hard-to-find or brand-name merchandise.

Visit the Mall today, and see why thousands of other CompuServe subscribers shop here. To access the Mall directly, type GO EM from any prompt in the Consumer Information Service.

ANSWERS FROM CUSTOMER SERVICE

Q: I haven't accessed one of my online personal files lately and now it is gone. Is there any way to get this back?

A: To offer adequate file storage for all our customers, a file that has not been accessed within 30 days is automatically deleted. CompuServe can restore files if you send a Feedback containing the filename and a date when you are certain that it was in your personal file space. There is a $25 charge for restoring one or more files per specific date.

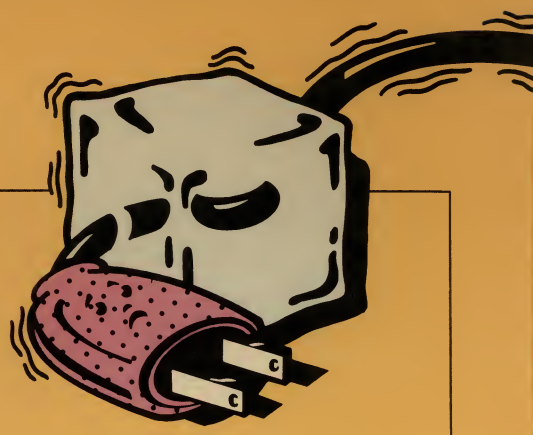
Q: Your electronic mail service is great! I'd like to compose my messages using my personal computer's disk and upload into Email. Can you help?

A: Thank you! It's our pleasure to forward the following instructions on to you.

1. Be sure that your terminal software supports RAM buffer transfers.
2. Compose your message in your personal computer's disk.
3. Log on to CompuServe and enter GO PER at a ! prompt to enter the Personal File area. The File Management menu will be displayed.
4. Select "Create and edit files via FILGE." You will be asked to enter a filename. Type in up to six alphabetic characters, optionally followed by a period (.) and three more alphabetic characters. You will be told that a file is created and now "ready."
5. Upload your message from your personal computer's disk by performing a RAM buffer transfer. (Consult your software instructions to determine the commands to complete this transfer.) Be sure to enter a control-j (i.e. an ASCII carriage return character) after every line transferred. After the last line of your message is transferred, enter /EX at the start of a new line to exit the file.
6. Enter GO EMA and select "Compose and send mail" from the menu. Then, select "File from disk space" from the next menu. You will be asked for your filename. Enter the same filename that you created in step 3 above. You'll receive a message "Workspace loaded from . . ." and then a ! prompt. Press the carriage return key, and the Email menu will be displayed. Select "Send message from workspace" and answer the next prompts to complete the process.

Q: I love all the services in the Executive Information Service, but how can I use the services in the Consumer Information Service?

A: It is easy to move from the Executive Information Service into the Consumer Information Service. Enter GO CIS at a ! prompt and you're there. CompuServe recommends you purchase a Consumer Information Service User's Guide to efficiently use these services. Enter GO ORDER at a ! prompt in the Consumer or Executive Information Service and place your order. To return to the Executive Service from the Consumer Service, enter GO EIS.



Q: Occasionally, while I am using CompuServe, the services seem to freeze. What should I do?

A: This situation could be due to various reasons. CompuServe suggests you check the following list for possible causes.

- Enter a control-Q command. This will start the display again if we received a control-A or control-S command from your computer, which would stop the display.
- If you're using software that supports a printer, be sure the printer is "disabled" within the software's terminal options.
- A noisy telephone line may have caused you to be disconnected from CompuServe. A call-waiting service on your telephone might cause this to happen when the line is "beeped," indicating another call is waiting. If you suspect this has happened, disconnect the telephone from your modem and check the line for a call waiting.
- If you are typing in a line and reach 132 characters without pressing the return key, you cannot enter any more characters, and it will appear that your screen is frozen. This can happen when typing a line into the service or uploading a line that is more than 132 characters. Your keyboard will lock, and you'll have to turn off your computer to start again. Please be aware of the line length of your terminal and try not to exceed it.
- If you happen to log on during a time when an unusually large number of other subscribers are already using the service, response time may be slow and your screen may appear to be frozen. You may want to log off and wait to use the service in about 30 minutes.

If you try the above remedies and still have a problem, please call Customer Service with the details of your situation.

— Mary Conway, Kathy Hamilton, Judy Voight

LIGHT IN THE SHADOWS

Between the intention and the action, a poet once wrote, lies the shadow. Shadows are great places to explore. They hide dark secrets, wondrous sights and grand possibilities. They're also likely places to stumble. Many of you neophyte networkers find the interface between your small machines and the big machines at CompuServe particularly ill-lit.

In last month's column, we touched on the problem of making your protocols match up with the CompuServe system's protocols. This time around, let's expand on that. Perhaps those shadows can open up a bit with the right sort of enlightenment!

While every network transmits simple alphanumeric characters (that is, letters and numbers), each one uses a different set of commands. Your software uses yet another set of commands. Sometimes those commands don't match up! It's your job to link your software's orders to the rules of the network—to cross the interface, as it were. The interface is our hypothetical region of shadows. Let's take a look at some lighting techniques.

The mistake most new networkers make is expecting the network to do the work for them. To an extent, this is the network's own fault. When you receive a prompt like, "Begin sending your data now," you may not know what kind of data is acceptable, how to get the network to accept it, or how your software commands will interact with the network's software commands. You can't expect the network to "know" your software. There simply isn't any way for a network to include all the different command possibilities of different software packages in its own documentation. So, when the network expects you to upload a file (that is, send a file to the network), it just asks you the name of the file and tells you to begin sending your data.

This is where many neophytes say, "OK," provide the filename, and just wait. And wait. And wait some more. And, of course, nothing happens. The network cannot tell your computer what to do! You have to figure out how your system sends and tell it yourself. By issuing the "upload" or "send" command to the network, all you've really done is told the network to *expect* a file from your end.

How, then, do you accomplish that feat? The network can't tell you, because every software package uses its own upload commands. I can't tell you either: I don't know the commands for every package on the market. You have to figure it out for yourself. That's what your software manual is for.

Suppose you've looked through your manual and know how to send a file. You issue the commands, first to the network, telling it to expect a file, then to your own computer, telling it to transmit. And, poof! — you lose your connection to the terminal. What went wrong?

The most likely source of trouble is not how you sent the file, but what you sent with it. Every package uses its own word processing formatter. Somewhere between your input and the computer's output, "formatting" commands are invoked by your software. These change your file into data that your computer can store. When you send a file, the computer invokes the formatter again, changing your file back into English. The data itself is not English, though! It's a series of numbers.

Think back to actually writing the file. Did you include any formatting commands? If your word processor allows you to insert a paragraph indentation with a control-P, for example, did you leave the control-P in there? That little control code might have been transmitted intact. Instead of "seeing" a five space indentation, the network might have received the control code. And that control code means nothing whatsoever to the network. Some software uses control-C or control-Z formatting commands. Those commands *do* mean something to the network, but not what you expect. They mean "interrupt transmission" or even "logoff."

Often, the documentation that comes with software fails to explain the difference between the information on your screen and the data it actually stores. But you must remember they are not one and the same! Many a frustrated networker tries to send files that are incompatible with either the network software or the telecommunications software used to reach the network in the first place.

For example, suppose you have written a file into a BASIC computer language word processor. You boot up your BASIC telecommunications program. Sliding the word processing disk into your drive, you command the program to send your BASIC file to CompuServe. And you get an error message.

In this situation, your word processor is not storing straight ASCII characters. Instead, it is formatting the data to a particular protocol. Since your telecommunications software doesn't use the same protocol, it cannot read your file.

Another common problem occurs when networkers fail to examine exactly what their formatters do when they format a file. For example, suppose you have your word processor set to provide justified margins. It looks very nice, with both edges set in perfectly straight lines. You transmit it that way, and wait for other networkers to comment. "Gibberish," they say. "Why are the lines all crooked?" they ask.

What happened? Briefly, your formatter, in justifying each line, added one space to the beginning of each line in order to justify the left side of the text. The network, receiving those spaces at the beginning of each line, assumed you wanted to "force" the network's own formatter to treat each line 'as is.' Instead of formatting your separate lines into paragraphs for the recipients' various machines, the network treats each line as a paragraph. Thus, your 80-character-long lines become sets of 64 and 16 character lines on 64-column computers.

These are just a few of the mishaps that occur when you take for granted the shadows between the your system and the network. But don't let such stumblings make you feel inept or clumsy. They happen to everyone.

The first time I transmitted this column to *Online Today* magazine, I forgot to remove some control codes. The column vanished from storage as a result, and I didn't even know it! The fact that you can read it now demonstrates a simple point: Even the most voracious shadows vanish under sufficient light.

Alex Krislov is a free-lance writer from Cleveland, Ohio. His CompuServe User ID is 76703,243.

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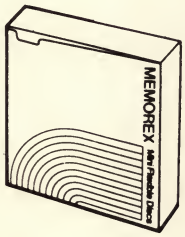

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VISIFILE
Database Management System

VisiCorp
2895 Zanker Rd.
San Jose, CA 95134
408/942-6000

Computers: IBM PC, PC-XT; Apple II Plus, IIe.
Operating Systems: PC DOS; Apple DOS.
Media: Two standard disk drives required.
Required Peripherals: None.
Other Requirements: 64K of RAM.
Optional Items: Double-sided drives are recommended for IBM PC and PC-XT computers.
System used for test: IBM PC, 128K RAM, two double-sided disk drives, Okidata 84 printer.
List Price: $250 for the Apple, $300 for the IBM

Reviewed by William J. Lynott

VisiFile is a simple file-management system, not a true relational database manager; but you'd hardly know it. While it cannot work with more than one open file at a time, it's difficult to find something else that it cannot do.

The power and flexibility of the *VisiFile* program is surprising in light of how easy it is to learn and use. The documentation is beautifully done in a compact three-ring binder. Instructions are meticulously clear and effectively illustrated.

The program comes on three disks, which makes for more disk swapping than I like, but that inconvenience does seem a small price for the many features that are supported.

VisiFile is completely menu-driven, and no programming experience is necessary to use it. Defining a file, which is the first step in setting up your new database, is made easy by a screen display that prompts you for the name of each field, its size, and its type. Fields may be designated as alphanumeric, numeric, $, date, or auto-date, which automatically enters the system date into that field. As you define each field, you will be asked if you want to "protect" the field. A yes answer makes it impossible to change the original entry into that field. A password to gain access to the file is optional.

Individual fields may contain up to 1000 bytes, with a maximum of 40 fields per record (2048 bytes and 104 fields if your system has 128K RAM or more). The maximum number of records in a file is limited only by the size of each record and the capacity of the disk. Designating "key" fields is not necessary; *VisiFile* will sort and search on any field.

Once you have defined a file, the program will set up an automatic "map" for displaying your blank records. If the arrangement doesn't suit your needs, a procedure for creating your own custom map allows you to display your data in any arrangement you choose.

Once your file has been defined, most work will be done in the "maintain" mode. Records may be added, changed, viewed or deleted in file maintenance. Deleted records are not lost forever, only moved to an "inactive" status from which they can be retrieved at any time.

VisiFile is written in BASIC, and that means that the search and sort routines are going to be slow. And slow they are. Sorting a very large file on a full double-sided disk may take an hour or longer. Also when printing a report that calls for selected records from a large file, you'll find your printer pausing frequently waiting for the program to catch up.

Like the rest of the program, though, the report generator is flexible and easy to use. Arranging your report or mailing label formats requires only that you follow the prompts that ask you how you want things arranged. Reports can be printed with titles and subtitles, and records can be printed in the order of the current index or in the sequence in which they were originally entered.

If you need to send out form letters, *VisiFile* can accommodate by merging address files with your form letter composed on a word processor or standard text editor.

While doing this review, I discovered a "bug" involving date fields. The version of *VisiFile* that I was using didn't like the year 1984. If the system date entered was for 1984, the program would not permit entries into any date field. A call to VisiCorp's technical support number (not toll-free) in California brought a courteous and prompt reply. They already knew about the problem and quickly sent me a set of new disks at no cost. Free replacements for owners of the faulty version are being sent out.

Although *VisiFile* cannot compete in a technical sense with the likes of dBase II, it does offer an ease of use, flexibility, and price that make it a true bargain

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MULTI-RAM
Dividing a PC Memory

Softsmith Corp.
1431 Doolittle Dr.
San Leandro, CA 94577
800/341-4000

Computer: IBM PC or PC-XT; some PC-compatible computers.
Operating System: PC DOS, MS DOS.
Media: Floppy disk.
Required Peripherals: 128K memory (more recommended).
Other Requirements: None.
Optional Items: Hard disk.
System used for test: IBM PC, COMPAQ Portable Computer.
List Price: $99

Reviewed by Mark Bernstein

The IBM Personal Computer and its work-alike kindred handle a lot memory. Most programs don't need all this memory, and so much of the memory sits idle.

Softsmith's *Multi-RAM* lets you put more memory to work by storing several different programs in memory at the same time. It slices up your PC's memory into chunks, and makes each chunk behave like a separate computer. Only one program can run at a time, but *Multi-RAM* can switch programs instantaneously with a single keystroke.

Using *Multi-RAM* you can, for instance, run a spreadsheet program in one chunk of memory, use your word processor to create reports in a second memory area, and keep a database manager handy in a third part. Press a key, and you jump from one section to another.

Multi-RAM also can move information between programs; using a simple "copy and paste" buffer, you can "pick up" data that one program typed on the screen and send the data to another program. This sort of transfer is handy for simple tasks, like copying portions of a spreadsheet into your word processor, but it just can't handle more ambitious problems (like moving templates between different manufacturers' spreadsheets).

Unfortunately, *Multi-RAM* doesn't work with all programs. Some, like the Microsoft Flight Simulator and MMS FORTH, circumvent PC DOS and won't load under *Multi-RAM*. Other programs don't obey the rules that *Multi-RAM* imposes. D.C. Hayes' popular *Smartcom* communications program won't work. Nor will Quadram's print spooler. Nothing that uses the UCSD p-system seems to run. The *Multi-RAM* manual promises that VisiCalc will load in some partitions, but warns that it may not work in other parts of memory.

In short, *Multi-RAM* can be a terrific time-saver only if it works with your application. Most MS DOS programs will work with *Multi-RAM*, though a prudent buyer will need to "test-drive" individual programs to make sure they're compatible.

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XENO-COPY:

Moving "Foreign" Disk Files to IBM PC Diskettes

Vertex Systems
7950 W. 4th St.
Los Angeles, CA 90048
213/938-0857

Computer: IBM PC or PC-XT and compatibles including Columbia, COMPAQ, Corona, Chameleon, Rainbow 100 and DEC VT180.
Operating System: PC DOS (1.1 or 2.0) or MS DOS.
Media: Two 5¼-inch floppy disk drives or one floppy drive with a hard disk.
Required Peripherals: None.
Other Requirements: PC DOS 1.1 needs 64K RAM; PC DOS 2.0 needs 128K.
Optional Items: None.
System used for test: 256K COMPAQ Portable Computer running PC DOS 1.1 and equipped with two 320K disk drives.
List Prices: $99.50 for the Xeno-Copy (unidirectional); $124.50 for the Xeno-Copy (DEC Rainbow version); $149.50 for the Xeno-Copy Plus (bidirectional)

Reviewed by Ernest E. Mau

Xeno-Copy moves files from other systems onto PC DOS diskettes. Direct disk copying needs no modems or other added hardware, reading "foreign" files from one drive and writing to a PC diskette in another. This provides quick transfers of word processing, database and other files. *Xeno-Copy* does not convert programs, so executable foreign programs do not run as-is on the PC.

Only the unidirectional *Xeno-Copy* was tested, copying to PC diskettes. A bidirectional "Plus" version for copying in either direction was not tested.

Xeno-Copy worked well with CP/M files from Morrow Designs' Micro Decision SS and DS, Osborne DD, Kaypro II, Xerox 820 SSDD, and IBM CP/M-86 DS diskettes. It actually supports 45 formats, but TRS DOS 1.3, Televideo, Sanyo, Cromemco, NEC, Zorba and others were not tested.

The program is packed with menu-driven options for file display, drive selection, read retries, directory display and others, and it proved easier to use than the documentation indicated.

It's a useful program. Swapping data between incompatible machines can be complicated and frustrating, but *Xeno-Copy* removes much of the pain.

Two cautions! First, the documentation is peppered with disclaimers. For example, only specific TRS-80 formats are supported. Therefore, prospective users should contact the supplier to verify availability of their formats.

Second, some ASCII text files needed extensive editing, though that's to be expected in intercomputer transfers.

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Z/PLUS
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California Computer Systems Inc.
250 Caribbean Dr.
Sunnyvale, CA 94086-1079
408/734-5811

Computers: IBM PC, PC-XT, and some compatible microcomputers.
Operating System: CP/M-80 provided by plug-in board.
Media: Two single-sided or double-sided disk drives.
Required Peripherals: None.
Other Requirements: None.
Optional Items: Up to 192K of added RAM provided on the card; additional IBM-compatible RS-232 asynchronous serial interface is standard on the card.
System used for test: 256K COMPAQ Portable Computer (IBM PC compatible) with two double-sided disk drives and existing parallel and serial interface adapters.
List Price: $795

Reviewed by Ernest E. Mau

You might ask why anyone would add 8-bit CP/M-80 (CP/M 2.2) to an MS DOS or PC DOS computer. One reason might be simply because it's possible to do so. Another might be to use myriad CP/M programs commercially available. Or, like me, you migh have switched to MS DOS after spending years with CP/M systems and accumulating megabytes of data and custom programming you'd like to salvage.

California Computer Systems' *Z/Plus* plug-in "coprocessor" is supposed to do those things. It adds a Z80-B microprocessor, an IBM-compatible serial interface (COM1 or COM2), and up to 192K of RAM to the computer. It also comes with the CP/M-80 operating system and utility programs.

This card really runs the CP/M system — separate from PC DOS or MS DOS! Unlike some other coprocessors, the Z80-B isn't dependent on PC DOS or an 8088 microprocessor for executing programs. However, the added RAM and the serial port are usable under PC DOS as normal memory and interface expansions.

Using CP/M itself is both a blessing and a curse for *Z/Plus*. It's a blessing because users familiar with CP/M already know the system. Put the supplied CP/M diskettein drie A and boot — the computer then is running under CP/M control. To exit, execute the program TERMZ+.COM, and control returns to DOS. While in CP/M the video display emulates the basic functions of an ADM-31 terminal and the standard IBM PC keyboard is supported by converting keyboard scan codes to extended ASCII characters.

It's a curse because the system is isolated. The *Z/Plus* system couldn't read diskettes formatted for PC DOS, MS DOS, or CP/M-86 on an IBM PC, nor could it read CP/M diskettes I tried to import from other machines, including Morrow Micro Decision single- or double-density, Apple CP/M formats, or several others. There is, in fact, no statement of compatibility with any common CP/M disk format, which could mean continuing trouble acquiring software. While the supplier indicated he might introduce a utility program to read PC DOS diskettes and import files via them, it's not known when or if it will be available.

During the interim, getting application programs into the system requires some other method. One could use a modem or direct cabling to another computer to upload files, but *Z/Plus* provides no software for that purpose. It's first necessary to figure out how to get such a program into the system, possibly by using PIP.COM to input a short "loader" and then using it to import a larger communications program. There is a statement in the manual that 8088 and Z80-B processors can pass information "by placing data in the *Z/Plus* card RAM accessible to both processors." However, there are no further details, and I wasn't successful with this method.

There are other problems as well. Understand that the board itself works admirably. The only part of the hardware I don't like is that memory assignments for the 192K on the *Z/Plus* are determined by a pre-installed memory decoding PAL that must be obtained from the supplier. Without user-settable switches or jumpers, adding other memory cards to the computer could mean going back to the supplier for a new chip just to relocate the on-board memory.

Software is another matter. The standard CP/M utilities furnished include ASM.COM, DDT.COM, DUMP.COM, ED.COM, LOAD.COM, PIP.COM, STAT.COM, SUBMIT.COM, and XSUB.COM. Notice that FORMAT.COM, SYSGEN.COM, and MOVCPM.COM are missing. With a fixed CP/M size, *Z/Plus* uses a hybrid COPYDISK.COM program to format diskettes, copy system tracks or copy entire diskettes.

DISKCOPY.COM did not work on the COMPAQ computer. It would format single- and double-sided disks, but wouldn't copy tracks. No matter which drive was the destination, all attempts at copying system or any other tracks resulted in a "drive not ready" error. Yet, a formatted diskette could receive PIP.COM copies without trouble — though that did little good since the copy diskettes did not have the CP/M system and could not be booted.

Being curious, I tried *Z/Plus* in a straightforward IBM PC at a local dealer. Everything worked perfectly, including DISKCOPY. I then had my COMPAQ checked, complete with drive adjustments, but still no luck getting that one program to work. Numerous phone calls to the supplier failed to solve the problem, and left me feeling they were somewhat disinterested. Their one suggestion about moving a copy of SYSGEN into the system proved impractical in light of the problems of importing files. Also, *Z/Plus* uses three diskette tracks for the system instead of the conventional two tracks.

I consider the documentation inadequate. Admittedly, the manual was a "preliminary printing," but it didn't seem sufficient for unsophisticated users. Mostly, it's a reprint of Digital Research CP/M manuals, even to including descriptions of SYSGEN and MOVCPM programs not furnished. To that, 20 pages specific to the *Z/Plus* have been added — varying from generalities to extensive and unexplained technical details of use only to experienced, machine-language programmers. Some information is incomplete, such as the missing 8088 I/O Map marked "to be supplied." There are references to CCS schematic drawings, which aren't supplied. Even reference to the need for changing the memory control PAL to alter addresses is buried and hard to find. It doesn't tell much about the serial port either, referring the user instead to the IBM Technical Reference Manual for information.

In summary, though *Z/Plus* seems promising and could be useful to highly sophisticated CP/M users, especially those inclined toward a "development

system," the supplier must do a lot more work to make it attractive to inexperienced users. Until more support software is available, users needing "plug in and go" access to CP/M programs through an IBM PC probably would do better elsewhere. Furthermore, until the supplier solves the problem with the DISKCOPY program, if they ever bother, users of IBM PC compatibles probably should avoid *Z/Plus*.

In its current form, *Z/Plus* seems something like a three-legged cat. Eventually it gets where it's going, but with a lot of bumps, thuds, and scrapes along the way.

Circle 14 on the Reader Service card or GO EBB.

ULTRATERM

Videx Inc.
897 N.W. Grant Ave.
Corvallis, OR 97330
503/758-0521

Computers: Apple II, II Plus, IIe and III, and Franklin 1000.
Operating Systems: BASIC, Pascal, and CP/M.
Required Peripherals: CRT Monitor.
Other Requirements: None.
Optional Items: High-persistence phosphor monitor.
System used for test: 64K Apple IIe, running with BASIC, Pascal and CP/M software, various monitors.
List Price: $379

Reviewed by Alex Krislov

When the earliest Apple computers rolled off the assembly line with an inherent 40-column limitation, a number of hardware manufacturers were eager to leap into the breach. Taking advantage of the expansion slots built into the Apple, they supplied a number of different boards to bring the computer's monitor capabilities up to 80 columns and 24 lines on each screen "page."

One of these manufacturers has gone a step further. Instead of 80 characters per line, Videx reasoned, why not the 132 characters available on many printers? Instead of 24 lines to a screen page, why not 48, to enhance many word processors? Why not build in an alternate character set, for those displeased by the standard one? And, for a final touch, could it hurt to provide both normal and inverse video?

The *Ultraterm* board turns the monitor into an amazingly versatile display device — if you have the right monitor. In normal mode, the board will send the standard 80-by-24 format to the screen. This can be expanded to 96 by 24, 80 by 32, 80 by 48, 132 by 24, and 128 by 32. On one monitor, it is possible to display 160 characters in each of 24 lines!

The very technology that makes these expanded screen displays possible, however, limits many of those screens to particularly advanced monitors. *Ultraterm* produces the screens by "interlacing" the commands to the cathode-ray-tube controller. The interlace function results in only half as many horizontal scans of the screen, in a given period, as the standard screen display produces.

Used with a high-persistence phosphor monitor, such as the Apple III Monitor or the Amdek 300A, *Ultraterm* expanded screens are easy to read. When the monitor is a low-persistence phosphor model, or lacks the requisite 15 megahertz bandwith, the expanded screens will "shimmer." The shimmering screens guarantee eyestrain, making the board's wider screens less than useful on an average monitor. But even with such a monitor, the *Ultraterm* provides bonuses.

The basic mode of an *Ultraterm* emulates Videx's earlier 80-column board, the *Videoterm*. But *Ultraterm* produces a vastly superior character set. Even with the best monitors, it is difficult to see the separate dots forming the letters on the screen. Additionally, the board can be commanded to send both high- and low-lighted (bright and soft) displays in both normal and inverse (black letters on a fully-lit screen) lettering.

But it is on high-persistence phosphor monitors that the *Ultraterm* really struts it stuff. The various expanded screens allow an unprecedented amount of information to be displayed. The 128 by 32 display is particularly impressive on spreadsheets such as VisiCalc or Videx's own UltraPlan. Word processors suddenly require far less scrolling with a 48-line display. The impressively designed character sets render the improvements quite readable — more readable, in fact, than 80-by-24 displays one sees from most boards.

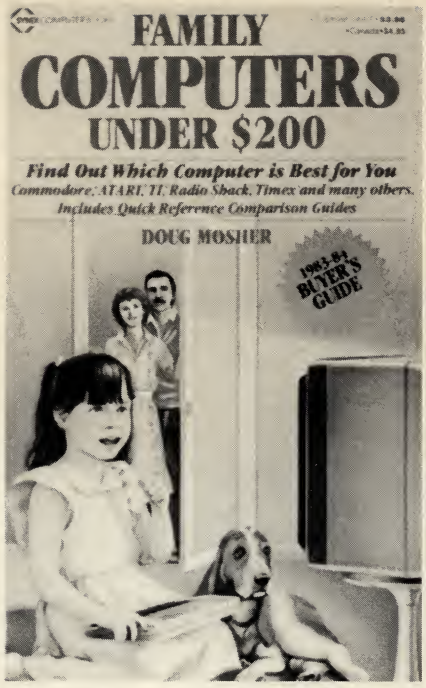
Of course, most software is not designed to take advantage of such expanded screen displays. Thus, the *Ultraterm* manual goes into agreeable detail on adapting various languages and programs to make the most of the board. "Pre-boot" software is available on disk for such popular programs as Applewriter II and VisiCalc. Terminal communications programs may also be configured to the various screen formats — and the board has no difficulty dealing with 1200-baud modems.

A final benefit will be of special interest to BASIC programmers. The firmware is designed to assume any input not enclosed in quotation marks should be capitalized. This feature saves keystrokes on the control-A case switching, or allows the programmer to ignore the caps/lock key. Of course, the firmware does not interfere with normal word processing.

A few problems must be noted. First, this board tends to grow very hot quite swiftly. A computer lacking a fan might overheat and lock up as a result. Second, like most 80-column boards, the *Ultraterm* is automatically triggered by most Pascal-based programs. Thus, a program such as "Wizardry," which defaults to 40-column screens, will trigger the board's built-in "softswitch," and no output will appear on the screen; in such cases, the user will have to pull the monitor plug out of Videx's supplied cord and plug it into the Apple's 40-column output.

Given the right environment, though, this board's expanded screen formats and improved character sets effectively unlock the computer's built-in display limitations. If you want a word processor with plenty of information on the page, a spreadsheet that really spreads wide, or just letters that won't strain your eyes after a few hours, look into the *Ultraterm*. It might be the board that fits your special needs.

Circle 15 on the Reader Service card or GO EBB.



FAMILY COMPUTERS UNDER $200

By Doug Mosher
Sybex, 1983
160 pages; $3.95 (softcover)

PORTABLE COMPUTERS

By Sheldon Crop & Doug Mosher
Sybex, 1983
128 pages; $7.95 (softcover)

Reviewed by Francine Sevel

Interested in buying your first computer? If so, *Family Computers Under $200* or *Portable Computers* can ease your bewilderment.

Both books are a definite asset if you're about to take the plunge and are uncertain if you should hire a data processing expert or just buy what's on sale at the discount store. Whether you're contemplating a new toy for the tykes or a briefcase computer to replace your accountant, these books raise vital considerations regarding choosing and using computers, warranties, add-on capabilities, in-store support and proper care — considerations that the novice usually doesn't worry about until it's too late.

As a component of the Sybex Popular Series, *Family Computers Under $200* is clearly directed toward the layman. Mosher goes to great lengths to avoid technical jargon and, unfortunately, vital information and clarity are often sacrificed.

Apparently, when Mosher teamed up with Sheldon Crop to write *Portable Computers*, it was assumed that the person about to buy a portable computer is more capable of grasping technical jargon. This text offers a more comprehensive explanation of how a computer functions.

Wondering which brand to buy? In *Family Computers for Under $200*, Mosher, Sybex's book series manager, presents an excellent comparison of the Timex/Sinclair 1000, Commodore VIC 20, Commodore 64, Texas Instruments 99/4A, Radio Shack Color Computer and the Atari 600XL. He discusses not only the strengths and weaknesses of each machine, but also the components and costs of the primary systems and peripherals, as well as each micro's capabilities for games, education, family business and programming.

Surprisingly, both guides fail to address the importance of first determining your primary objectives, scouting the best software accordingly, and then selecting your hardware. Whether you spend two days' or two months' salary on your computer, buying the hardware before the software is probably the most common and costly error of novice buyers.

Although the books are recommended for the person contemplating that first journey into computerland, they probably won't be too helpful for those who are about to become a two-computer family.

THE IBM PC CONNECTION

By Neil L. Shapiro
Micro Text/McGraw-Hill, 1983
192 pages; $16.95 (softcover)

Reviewed by James Moran

In this update to his previous book, *The Small Computer Connection,* Neil Shapiro has continued with his philosophy of packing a lot of information into a small book. If you are a constant, or even a sometime, user of information utilities such as CompuServe, you will even find some helpful hints here on saving money.

The two initial chapters on the basics of telecommunications will be particularly useful to computer novices (and not a few oldtimers, I suspect), who wonder just what is going on between their telephones and CompuServe's computers. For those who are familiar with modems and telephone networks, these chapters can be skipped over in favor of the chapters with more practical information about accessing the major networks that make up much of the remaining book.

Neil Shapiro is the systems operator of MAUG, the MicroNet Apple Users' Special Interest Group on CompuServe, and his experience as sysop is evident in the many examples that are scattered throughout the book. His familiarity with other major information utilities will also be helpful to novice users, particularly if they access them on an infrequent basis.

In the second half of the *IBM PC Connection,* Shapiro delves into some of the more advanced features of networks such as CompuServe. If you are as confused about creating, sharing and reading files as I was about a year ago, then you will find that these chapters help to clear away some of the mystery. Two of them — files and uploading/downloading — are probably worth their weight in time charges, and they will most likely eliminate any trepidation you may have about using these "advanced" functions.

The book continues with what might be called the "super-advanced" topics of computer-to-computer communications (you and a friend) and SSTV (Slow Scan Television). Both of these subjects are fascinating, although SSTV might be considered esoteric by some people (remember when computers were esoteric?). If you are getting bored with games and balancing your checkbook, these sections are guaranteed to pique your interest.

A more-than-useful appendix ends the book, and here is where you will find a list of several hundred public bulletin boards. The list is thoughtfully arranged in both alphabetical and area code sequence. Calling some of these boards should eliminate most of your spare time for the better part of 1984.

In summary, this book is well written, understandable and easy-to-use. A word of caution: If you already have Shapiro's *The Small Computer Connection,* don't rush out to buy this one. This book is basically a revision of the previous one with additional information and updated procedures for users of the IBM PC. If, however, Neil Shapiro's previous book is unknown to you, you will find this a useful addition to your library of computer books.

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1. ☐ $1-$999.
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4	14	24	34	44	54	64	74	84	94	104	114
5	15	25	35	45	55	65	75	85	95	105	115
6	16	26	36	46	56	66	76	86	96	106	116
7	17	27	37	47	57	67	77	87	97	107	117
8	18	28	38	48	58	68	78	88	98	108	118
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Chapter 10

THE WINDS OF CHANGE

Editor's note: Steve Roberts, Online Today*'s nomadic journalist, is currently traveling around the United States on a recumbent bicycle. He uses a Model 100 for both writing and communications. During this trip, which is expected to cover 15,000 to 20,000 miles, Roberts is writing regular columns for* Online Today, *as well as a book entitled* Computing Across America, *which will be published in 1985 by Simon & Schuster.*

When you live on a bicycle, certain things take on larger-than-life significance. Hills, for example, never mattered much when I drove a car, and back roads were just that: back roads.

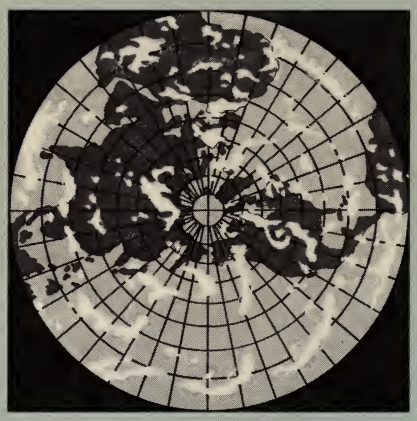
And then there's the weather. An effective way to become *really* conscious of wind, rain, temperature and humidity is to simply get rid of your house, pack everything important on a bicycle and live year-round on the road. What once was a pleasant breeze might now be a brutal headwind, a treacherous sidewind or an exhilarating tailwind.

During the first 5,000 miles of this journey, I have gradually become attuned to these things. I've learned to judge a cycling day by the feel of the morning air and the susurration of leaves. Barring unexpected flat tires, I can now pretty well target my arrival at the home of a distant host so that it occurs only minutes before dinner time. Awareness of weather conditions is, indeed, a key to survival.

Imagine my delight, then, when David Smith, my host in Slidell, La., offered (after dinner) to give me a grand tour of the National Weather Service installation where he works. This would have been technologically appealing anytime, but *especially* so with the famed headwinds of Texas within a few hundred miles.

I walked into the nearly windowless building late at night, finding a half-dozen men peering at screens, drinking coffee and making cryptic notations on maps. But what immediately captured my attention was a row of high-resolution displays that showed continuously repeating "loops" of recent satellite images. Clouds rolled across the screens, the past 24 hours compressed into seconds.

Standing there, contemplating a current and dynamic bird's-eye view of North America, I watched the fluid patterns hypnotically repeat. Around



me bustled routine activity: templates slapping against maps, jargon-filled conversations, the background noise of printers and facsimile machines and telephones.

"Like it?" asked a voice beside me. I had evidently been transfixed for some time. I turned to meet a grinning Walter Copes, satellite meteorologist, who in the next hour or so performed a brain dump on subjects ranging from the fine points of satellite image processing to the underlying causes of hurricanes.

His discourse explained the jet stream, why Kansas is dry, how boats can be knocked over by a distant thunderstorm, how the global monitoring system works, and where the uncertainties lie.

That doesn't necessarily make it predictable, however. Until recently, all this technology was unable to beat 50 percent accuracy in forecasting — a figure that could be achieved much more cheaply with the toss of a coin. Now, they say, it's on the order of 80 percent for the next 12 hours and 60 percent for a 5-day extended forecast (anything beyond that is called an outlook, not a forecast). As the computer models become more accurate and take more factors into consideration, the level of accuracy slowly, very slowly, increases.

But deficiencies in the models are many. The relatively stable weather patterns in the Midwest offer little challenge to the system, but the area around the Gulf complicates matters. Factors as diverse as the Texan "dry line," water reflectivity, the Gulf stream, and volcanic activity thousands of miles away all interact to determine whether or not it will rain here tomorrow. And this is where one final element enters the picture . . .

Human intuition. The need for human judgment in forecasting, say the experts, is almost gone. They prefer to think of the "educated guess" as the product of a natural bent for statistics, not of unquantifiable intuitive understanding. There's a running Art vs. Science battle here as there is in many fields, with, as my host observed, "some of us looking at the computers with doubt, others treating them as gospel."

"But," he added, "none of us can ignore them anymore."

Intrigued by all this, I decided to put the system to a test. "Will I have a headwind enroute to Hammond tomorrow?" I asked.

"Well, we have a low coming in this way. . ." someone began.

"Yeah, but it'll probably move into the upper atmosphere by morning," David observed, pointing at a map strewn with numeric data.

"I don't know, Dave. The last time this happened it settled right over here and stayed for awhile." He pointed vaguely at an area just north of us. The discussion went on, with contributions from various experts and machines. The general consensus, if one could be said to have existed, was that I would be buffeted most of the day by a sidewind from the south.

At about that time, all eyes turned to a standard television set, mounted in a rack next to the network communications processor. The 11 o'clock news was on, and an impeccably groomed weatherman was soundlessly gesturing at a colorful U.S. map highlighted with cute graphic symbols for sunshine, rain and snow.

"Aha!" I couldn't help but exclaim, "*this* is where you get your data!" (The chuckles were polite. It was an old joke around there.)

The TV weathercaster looked at his information and smoothly predicted a headwind. Hmmm. "They can draw their own conclusions," David said. "They receive some of our maps, but use their own radar and surface data."

The bottom line, of course, is that weather forecasting is still — and will remain for many years — something of a black art, supported by a complex and capable set of tools. But the tools are the creations of people who do not yet fully understand the system they have set out to model.

And thus the sky is full of surprises, like the pleasant *tailwind* that sped me along the next day to the start of a two-week adventure in Hammond, Louisiana.

Steve Roberts publishes a more current account of his adventures in a CompuServe database (GO CAA for details). His CompuServe User ID is 70007,362.

SHOPPER'S GUIDE

SOFTWARE

COMPUTER-ASSISTED INVESTMENT HANDBOOK
Dr. Albert I.A. Bookbinder
Programmed Press
2301 Baylis Ave.
Elmont, NY 11003
516/775-0933

Get new ideas and 50 profitable programs from author's 40 year investment experience in 220 page HANDBOOK: Stocks, Bonds, Options and Futures, Foreign Exchange and Statpak. All 50 BASIC programs also on disks. HANDBOOK $19.95.

JAMTERM-64
JAMWARE Computer Store
4813 S.E. 29th St.
Del City, OK 73115
405/672-8444 10:00am-6:00pm
CompuServe 74246,340

JAMTERM-64 is a powerful Commodore CP/M telecommunications package. It is a 'state of the art' circuit card interface, plugged between the Commodore and its modem. The JAMTERM-64 program conforms to CP/M industry standards and is written in Z/80 machine language. Features include: Send, receive, ASCII capture, terminal mode, auto-dial, error checking and much more. BYE-64 included FREE w/purchase of JAMTERM-64. Lifetime guarantee and only $149.95.

MACPAC
L.C.E. Utility Software
777 Kapiolani Blvd., Suite 3301
Honolulu, HI 96813
CompuServe 75535,1277

An advanced MAChine language development PACkage for the VIC 20. Any memory configuration. Detailed User's Guide with introduction to 6502 Assembly Language. Easy to use. Includes full screen editing, disassembler, debugging aids and documentation facility. $25 tape or disk (please specify).

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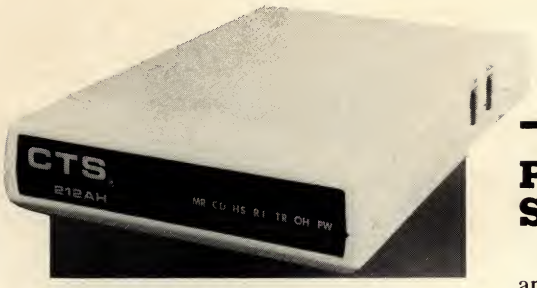

COMPUTER COMPANION

The Companion, a Bell 212A compatible modem designed for use in professional office environments, has been introduced by CTS Corp. Complete with MITE communications software and an instruction manual, the package sells for the price of the modem only.

The Companion modem can be connected to the RS-232 port of more than 100 personal computer configurations or can be menu-driven from the keyboard of data terminal equipment. Asynchronous full duplex operation at 300 and 1200 bps is a capability of the modem, as is 1200 bps synchronous operation.

For information, contact CTS Corp., Knights Division, 400 Reimann Ave., Sandwich, IL 60548. 815/786-8411.

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RADIO SHACK SUPPORTS XENIX

Radio Shack has added two software programs to its product line for computers supporting the XENIX operating system.

Profile 16 Multi-User Data Base Manager and SCRIPSIT 16 Multi-User Word Processor will offer small and medium-sized businesses a full line of business-oriented software to run on the TRS-80 Model 16B.

The XENIX operating system is Microsoft's version of the popular UNIX operating system for a multi-user market. Owners of the Model 16 who do not have XENIX may request it free from Radio Shack.

Profile 16 and SCRIPSIT 16 multi-user programs are available for $499 each at Radio Shack Computer Centers. For information, contact Tandy Corp./Radio Shack, 1800 One Tandy Center, Fort Worth, TX 76102. 817/390-3300.

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PROVIDING SECURITY

Western DataCom has introduced an expanded model 3060 LineGuard for preventing unauthorized dial-up access to stored data.

A caller dialing into the 3060 is prompted for an access code. He is given 20 seconds and two chances to correctly enter the code. If his entry is incorrect, the LineGuard will instruct the modem to disconnect and log an error. An optional monitor is also available to create an output log for either a printer or computer.

The device, which sells for $985, assures the same level of security normally limited to private lines. For information, contact Western DataCom, 5083 Market St., Youngstown, OH 44512. 216/788-6583.

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SHIELD IT

Belden/CPD has expanded its standard line of RS-232 shielded molded cable assemblies that interface between electronic data and communications equipment. These new assemblies will help systems comply with FCC emission regulations by providing a good ground path for unwanted noice, thus decreasing radiation.

These 25-position molded cable assemblies have a connector shielded with copper tape, which provides 100 percent coverage. The connector is molded into 5-, 10-, 25-, 50- and 70-foot standard lengths of conductor cable.

Representative list price for a 10-foot male-to-male assembly is $41.60. For information, contact Belden/CPD, 2000 S. Batavia Ave., Geneva, IL 60134. 312/232-8900.

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COMMODORE 64 FLYING COLORS

Commodore 64 owners can unlock their creative powers with a new color graphics software package designed for use with a standard joystick.

Flying Colors, which retails for $39.95 from The Computer Colorworks, provides a windowed screen menu that lets you pick the desired functions for drawing. Choices include thick and thin lines, automatic circles and boxes of any size, erasures and the ability to fill enclosed areas with a variety of colors.

Users can adjust drawing speed for exacting detail work and paint with a selection of different colors and brush sizes. Text can be added anywhere to the screen and a grid feature helps users to align their pictures, which can also be saved and retrieved from disk.

Flying Colors also includes a slide projector program so users can create their own slide shows for presentations and recreation. For information, contact The Computer Colorworks, 3030 Bridgeway, Sausalito, CA 94965. 415/331-3022.

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PC: INTELLIMODEM FOR THE IBM

PC: IntelliModem is a new plug-in modem for the IBM PC/XT from Bizcomp.

The 1200-baud modem features integrated voice/data capabilities and a receive sensitivity, which reduces errors while communicating over noisy lines or through bad connections. In addition, the product also monitors line status, such as dial tone and busy signals, so it can make connections with less chance of error.

IntelliModem comes with a built-in software package called PC: IntelliCom and documentation. It retails for $499. For information, contact Bizcomp, 532 Mercury Dr., Sunnyvale, CA 94086. 408/733-7800.

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Actrix DS includes all these standard features and comes with double-sided disk drives. It sells for $2,590. For information, contact Actrix Computer Corp., 2159 Bering Drive, San Jose, CA 95131. 408/263-3660.

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PC TALKS

The PC Talking Program from Computer Conversations is a machine language program that dynamically modifies the IBM PC so that it becomes a fully functional talking computer and not just a talking terminal.

The versatile program offers the user a choice of total speech, spelled speech, identification of upper and lower case and more. Developed by a blind programmer, PC Talking Program can be used by the visually impaired, as well as by educators, hobbyists and security programs.

For information, contact Computer Conversations, 2350 N. 4th St., Columbus, OH 43202. 614/263-4324. Call after 6 p.m. for an over-the-phone demonstration.

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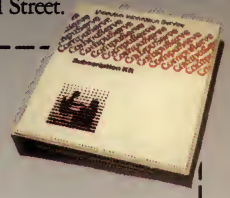

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